United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with the Colorado Agricultural Experiment Station, the High Plains Soil Conservation District, and the Prairie Soil Conservation District

# Soil Survey of Lincoln County, Colorado

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# How To Use This Soil Survey

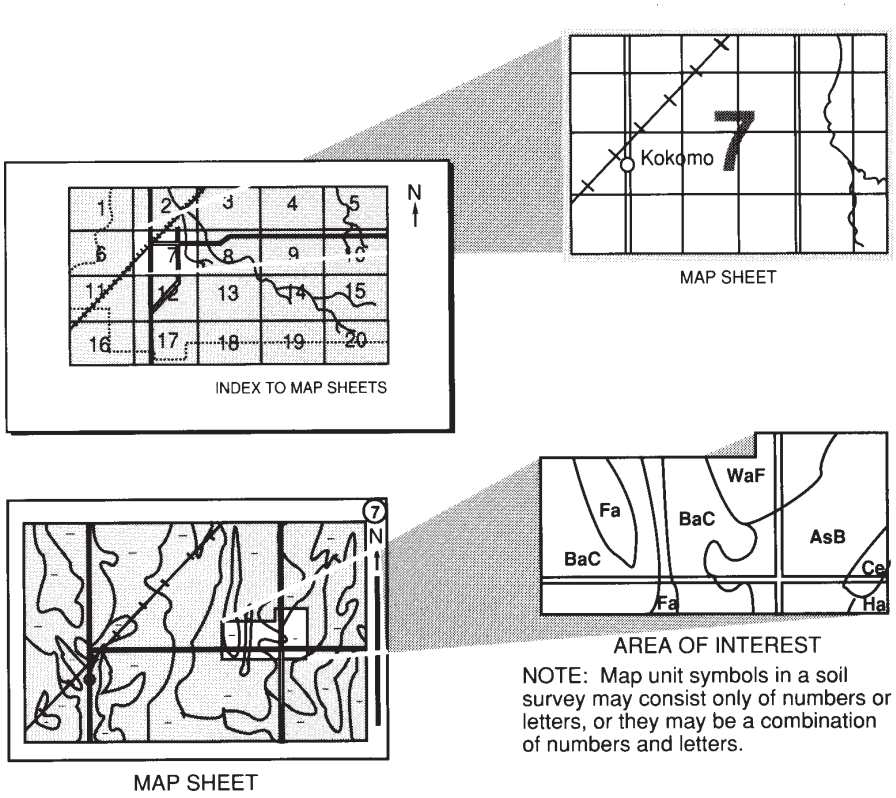
**Detailed Soil Maps**

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.




NOTE: Map unit symbols in a soil survey may consist only of numbers or letters, or they may be a combination of numbers and letters.

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 1999. Soil names and descriptions were approved in 2000. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1999. This survey was made cooperatively by the Natural Resources Conservation Service and the Colorado Agricultural Experiment Station. The survey is part of the technical assistance furnished to the High Plains Soil Conservation District and the Prairie Soil Conservation District.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

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**Cover: Cattle resting in an area of Deep Sands range site in Valent-Bijou complex, 1 to 12 percent slopes, in Lincoln County.**

*Additional information about the Nation's natural resources is available on the Natural Resources Conservation Service homepage on the World Wide Web. The address is http://www.nrcs.usda.gov.*

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# Foreword

This soil survey contains information that affects land use planning in this survey area. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

This soil survey is designed for many different users. Farmers, ranchers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information is available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

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# Soil Survey of
# Lincoln County, Colorado

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United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
the Colorado Agricultural Experiment Station, the High Plains Soil Conservation District, and the Prairie Soil Conservation District

Lincoln County is located in the Great Plains section of eastern Colorado, including a part of the area known as the Arkansas Divide (fig. 1). It is a double rectangle in the shape of a backwards L and is 48 miles wide in the southern part and 30 miles wide in the northern part. It has an area of 1,655,100 acres, or 2,586 square miles. In 2000, the population of Lincoln County was about 6,183. Hugo, the county seat, had a population of 885. Limon, the largest town in Lincoln County, had a population of 2,167 (Colorado Department of Local Affairs, 2000).

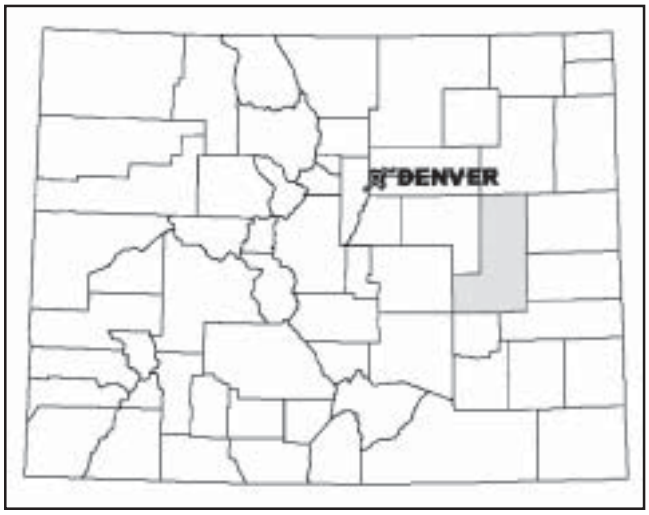



**Figure 1.—Location of Lincoln County in Colorado.**

## General Nature of the County

The following paragraphs give general information about Lincoln County. They describe history and development; natural resources; physiography, drainage, and relief; geology; and climate.

### History and Development

Much of the present area of Lincoln County lay within the Arapahoe-Cheyenne Reserve, established by the Boone-Culver Treaty in 1861. The treaty was never adhered to, and in 1867 the two tribes were moved to a reservation in Oklahoma. In the late 1800s, the cattle business was at its peak. Hugo was a major shipping point by rail to eastern markets. Lincoln County was organized on April 11, 1889, from parts of Bent and Elbert Counties and was named for Abraham Lincoln (Colorado Division of Local Government, 1985). In November 1889, Hugo, named for early pioneer Richard Hugo, was voted the county seat (Colorado Division of Local Government, 1985). Around the turn of the century, Lincoln County experienced its largest growth. The open range came to an end, and the Hugo Land Office filed a record number of homestead entries in the United States in March 1907. A highlight in the history of Hugo was the visit of President Theodore Roosevelt on May 4, 1903, while he was traveling by train on a campaign tour. The President was invited to stop for breakfast with local cowboys who were gathered for the spring round-up (Owen, 1967).

## Natural Resources

Soil and native vegetation are the major natural resources in Lincoln County. About 64 percent of the county is rangeland, which is primarily used for cattle production. About 23 percent of the county is nonirrigated cropland. Wheat and feed (millet and sorghum) are the main crops.

Sand, gravel, oil, gas, and wildlife are other natural resources in the county. Poorly graded sand and gravel of usable quality are extracted from drainage beds or pits in the Ogallala Formation. The sand and gravel are used mainly for road surfacing. Oil and gas production is limited to relatively small fields. The principal game animals are mule deer and pronghorn.

## Physiography, Drainage, and Relief

Elevation in the survey area ranges from about 4,420 feet above sea level in the southeast, near the East Fork Adobe Creek, to about 5,960 feet above sea level in the southwest, north of Steels Fork.

Lincoln County is part of the High Plains section of the Great Plains. In the northern part of the county, the North Fork and South Fork of the Arikaree River, the Arikaree River, Hell Creek, and the South Fork of the Republican River flow to the northeast. In the northern part of the county, a divide crossing diagonally from the northwest to the southeast separates the Arikaree River and Big Sandy Creek watersheds. Big Sandy Creek, Long Branch Creek, Rush Creek, Little Horse Creek, Horse Creek, Adobe Creek, Steels Fork, and Pond Creek are south of the divide and drain to the southeast.

## Geology

The Pierre Shale, Ogallala, and Peoria Loess Formations influence the soils in the survey area. Many Pleistocene and Holocene alluvium and eolian deposits also influence the soil formation in the county.

The Pierre Shale Formation consists of sediments deposited in a shallow inland sea during Upper Cretaceous time. It is gray, clayey shale. Midway and Razor soils formed in material from the Pierre Shale Formation.

The Ogallala Formation consists of sediments deposited by streams flowing from the Rocky Mountains during Upper Miocene time. It is poorly sorted, loose to well-cemented sand and gravel. Karval and Canyon soils formed in material from the Ogallala Formation.

The Peoria Loess Formation consists of windblown silt deposited during Pleistocene time. Colby, Bacid, Wiley, and Wilid soils formed in material from the Peoria Loess Formation.

Many recent alluvium and eolian formations were deposited during the Pleistocene and Holocene time periods. These formations consist of silt, sand, and gravel (United States Department of the Interior, 1976, 1978, 1979, and 1980).

## Climate

Thunderstorm days, relative humidity, percent sunshine, and wind information are estimated from the First Order station in Pueblo, Colorado.

Table 1 gives data on temperature and precipitation for the survey area, as recorded at Genoa in the period 1961 to 1990. Table 2 gives data on temperature and precipitation for the survey area, as recorded at Karval in the period 1961 to 1990. Table 3 provides data on the length of the growing season.

In winter, the average temperature is 29.2 degrees F and the average daily minimum temperature is 14.6 degrees. The lowest temperature on record, which occurred at Genoa on December 22, 1990, was -29 degrees. In summer, the average temperature is 70.6 degrees and the average daily maximum temperature is 86.4 degrees. The highest temperature, which occurred at Genoa on July 3, 1969, was 104 degrees.

The average annual precipitation is about 15.86 inches. Of this, about 11.50 inches, or 72 percent, usually falls in May through September. The growing season for most crops falls within this period. Thunderstorms occur on about 40 days each year, and most occur between May and August.

The average seasonal snowfall is 29.6 inches. The greatest snow depth at any one time during the period of record was 15 inches recorded on November 20, 1975. On the average, 33 days per year have at least 1 inch of snow on the ground. The heaviest 1-day snowfall on record was on November 27, 1983.

The average relative humidity in midafternoon is about 37 percent. Humidity is higher at night, and the average at dawn is about 68 percent. The sun shines 79 percent of the time possible in summer and 73 percent in winter. The prevailing wind is from the south. Average windspeed is highest, around 10 miles per hour, from March to May.

# How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a

discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept or model of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

A few areas in Lincoln County were not mapped because the landowners did not give permission for access. These areas are indicated as access denied areas on the detailed soil maps by the symbol 220.

The Major Land Resource Area concept was one model used during the mapping of Lincoln County. Major Land Resource Areas (MLRAs) are geographically associated land resource units (USDA, 1981). Identification of these areas is important in resource planning. MLRAs are characterized by a particular pattern of soils, climate, water resources, and land uses. Two MLRAs In Lincoln County are the Central High Plains Major Land Resource Area (MLRA 67) and the Upper Arkansas Valley Rolling Plains Major Land Resource Area (MLRA 69). The MLRAs differ in climate and crop yields. Soils in MLRA 69 are

drier, with a precipitation range from 11 to 14 inches, and generally have lower crop yields than those of the soils in MLRA 67, which has a precipitation range from 14 to 16 inches. Some soils that have severe limitations, such as low permeability, shallow bedrock, or a high sodium adsorption ratio, are mapped in both MLRAs. These properties are more limiting than the climate. Also, some soils that have a thick, dark surface are mapped in both MLRAs. These soils have a soil classification that allows an aridic or ustic moisture regime. A soil with “moist” in the map unit name is mapped in MLRA 67. A soil with “dry” in the map unit name is mapped in MLRA 69.

The descriptions, names, and delineations of the soils in this survey area do not fully agree with those of the soils in adjacent survey areas. Differences are the result of a better knowledge of soils, modifications in series concepts, or variations in the intensity of mapping or in the extent of the soils in the survey area.

# Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape. A few of the minor components listed in the map unit descriptions are not described elsewhere in this survey. Information regarding these soils is available in the local office of the Natural Resources Conservation Service or can be accessed through the “Official Series Descriptions” link on the USDA-NRCS Soil Survey Division Webpage.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Apishapa clay loam, 0 to 3 percent slopes, rarely ponded, is a phase of the Apishapa series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are called complexes.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of

the soils or miscellaneous areas are somewhat similar in all areas. Ascalon-Haxton complex, dry, 0 to 3 percent slopes, is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Gravel pits is an example.

In the descriptions, "LEP" means linear extensibility percent.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

## 101—Apishapa clay loam, 0 to 3 percent slopes, rarely ponded

### *Map Unit Composition*

Apishapa and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Apishapa**

*MLRA:* 67—Central High Plains; 69—Upper Arkansas Valley Rolling Plains
*Landform:* Depressions
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Slowest permeability class:* Slow
*Available water capacity:* High (about 10.7 inches)
*Shrink-swell potential:* High (about 7.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* At the surface
*Ponding frequency:* Rare
*Runoff class:* Medium
*Ecological site:* Plains Swale
*Land capability (nonirrigated):* 4w

*Typical profile:*
Ap—0 to 8 inches; clay loam
C—8 to 60 inches; silty clay

**Minor components**

Rago and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Overflow

Satanta and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

## 102—Arvada clay loam, 0 to 5 percent slopes

### *Map Unit Composition*

Arvada and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Arvada**

*MLRA:* 67—Central High Plains; 69—Upper Arkansas Valley Rolling Plains
*Landform:* Drainageways and fans
*Parent material:* Alluvium
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* High (about 9.1 inches)
*Shrink-swell potential:* High (about 7.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Salt Flat
*Land capability (nonirrigated):* 7s

*Typical profile:*
A—0 to 4 inches; clay loam
Btn—4 to 25 inches; clay
Bkn—25 to 44 inches; clay
Bkny—44 to 60 inches; clay loam

**Minor components**

Razor and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

Vonid and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Karval and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Manzanola and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

## 103—Ascalon sandy loam, 1 to 3 percent slopes

### *Map Unit Composition*

Ascalon and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Ascalon**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Eolian deposits
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 3c

*Typical profile:*
Ap—0 to 4 inches; sandy loam
Bt—4 to 15 inches; sandy clay loam
Bk—15 to 60 inches; fine sandy loam

**Minor components**

Haxtun and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Platner and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Olnest and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Pleasant and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

## 104—Ascalon sandy loam, 3 to 5 percent slopes

### *Map Unit Composition*

Ascalon and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Ascalon**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
Ap—0 to 4 inches; sandy loam
Bt—4 to 15 inches; sandy clay loam
Bk—15 to 60 inches; fine sandy loam

**Minor components**

Haxtun and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Otero and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent

*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Platner and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Pleasant and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

Vona and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

## 105—Ascalon sandy loam, 5 to 9 percent slopes

### *Map Unit Composition*

Ascalon and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Ascalon**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 5 to 9 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 4 inches; sandy loam
Bt—4 to 15 inches; sandy clay loam
Bk—15 to 60 inches; fine sandy loam

**Minor components**

Otero and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Platner and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

## 106—Ascalon sandy loam, dry, 1 to 3 percent slopes

### *Map Unit Composition*

Ascalon and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Ascalon**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Plains
*Parent material:* Eolian deposits
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
Ap—0 to 4 inches; sandy loam
Bt—4 to 15 inches; sandy clay loam
Bk—15 to 60 inches; fine sandy loam

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent

*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Haxtun and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Olney and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Oterodry and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Platner and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

**Additional feature**

- Blowouts occur in areas of this map unit.

## 107—Ascalon sandy loam, dry, 3 to 5 percent slopes

### *Map Unit Composition*

Ascalon and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Ascalon**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4c
*Typical profile:*
Ap—0 to 4 inches; sandy loam
Bt—4 to 15 inches; sandy clay loam
Bk—15 to 60 inches; fine sandy loam

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Haxtun and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 3 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Oterodry and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Platner and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

## 108—Ascalon sandy loam, dry, 5 to 9 percent slopes

### *Map Unit Composition*

Ascalon and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Ascalon**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 5 to 9 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)

*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 4 inches; sandy loam
Bt—4 to 15 inches; sandy clay loam
Bk—15 to 60 inches; fine sandy loam

**Minor components**

Olney and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Oterodry and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Platner and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

## 109—Ascalon-Haxtun complex, 0 to 3 percent slopes

### *Map Unit Composition*

Ascalon and similar soils: 55 percent
Haxtun and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Ascalon**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Eolian deposits
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 3c

*Typical profile:*
Ap—0 to 4 inches; sandy loam
Bt—4 to 15 inches; sandy clay loam
Bk—15 to 60 inches; fine sandy loam

**Haxtun**

*MLRA:* 67—Central High Plains
*Landform:* Drainageways
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
Ap—0 to 4 inches; loamy sand
BA—4 to 17 inches; sandy loam
Bt—17 to 44 inches; sandy clay loam
Btkb—44 to 60 inches; silt loam

**Minor components**

Olnest and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Otero and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Platner and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Pleasant and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

Vona and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

## 110—Ascalon-Haxtun complex, dry, 0 to 3 percent slopes

### *Map Unit Composition*

Ascalon and similar soils: 55 percent
Haxtun and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Ascalon**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Plains
*Parent material:* Eolian deposits
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
Ap—0 to 4 inches; sandy loam
Bt—4 to 15 inches; sandy clay loam
Bk—15 to 60 inches; fine sandy loam

**Haxtun**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Drainageways
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
Ap—0 to 4 inches; loamy sand
BA—4 to 17 inches; sandy loam
Bt—17 to 44 inches; sandy clay loam
Btkb—44 to 60 inches; silt loam

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Oterodry and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Platner and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Vonid and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

**Additional feature**

- Blowouts occur in areas of this map unit.

## 111—Bacid silt loam, 0 to 2 percent slopes

### *Map Unit Composition*

Bacid and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Bacid**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Plains
*Parent material:* Loess
*Slope:* 0 to 2 percent

*Drainage class:* Well drained
*Slowest permeability class:* Slow
*Available water capacity:* High (about 10.7 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
Ap—0 to 4 inches; silt loam
Bt—4 to 11 inches; silty clay loam
Btk—11 to 21 inches; silty clay
Bk—21 to 60 inches; silty clay loam

**Minor components**

Campo and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Weld and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Arvada and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Wilid and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

## 112—Bankard-Glenberg complex, 0 to 3 percent slopes, occasionally flooded

### *Map Unit Composition*

Bankard and similar soils: 55 percent
Glenberg and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Bankard**

*MLRA:* 67—Central High Plains; 69—Upper Arkansas Valley Rolling Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Rapid
*Available water capacity:* Low (about 3.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding frequency:* Occasional
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very low
*Ecological site:* Sandy Bottom Land
*Land capability (nonirrigated):* 6s

*Typical profile:*
A—0 to 5 inches; loamy sand
Bk—5 to 60 inches; loamy sand

**Glenberg**

*MLRA:* 67—Central High Plains; 69—Upper Arkansas Valley Rolling Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Low (about 5.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding frequency:* Occasional
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very low
*Ecological site:* Sandy Bottom Land
*Land capability (nonirrigated):* 3e

*Typical profile:*
Ap—0 to 3 inches; fine sandy loam
Bk1—3 to 32 inches; fine sandy loam
Bk2—32 to 60 inches; loamy sand

**Minor components**

Haverson and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Overflow

Karval and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 7 percent
*Drainage class:* Excessively drained

*Ecological site:* Gravel Breaks

Orsa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat excessively drained

Seldom and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Salt Meadow

Gravel pits
*Extent:* About 1 percent of the unit
*Slope:* 0 to 3 percent

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 113—Bijou loamy sand, 1 to 3 percent slopes

### *Map Unit Composition*

Bijou and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Bijou**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Plains
*Parent material:* Eolian deposits
*Slope:* 1 to 3 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Low (about 5.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
A—0 to 4 inches; loamy sand
AB—4 to 9 inches; loamy sand
Bt—9 to 36 inches; sandy loam
C—36 to 60 inches; loamy sand

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Valent and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 20 percent
*Drainage class:* Excessively drained
*Ecological site:* Deep Sands

## 114—Bijou loamy sand, moist, 1 to 3 percent slopes

### *Map Unit Composition*

Bijou and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Bijou**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Eolian deposits
*Slope:* 1 to 3 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Low (about 5.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
A—0 to 4 inches; loamy sand
AB—4 to 9 inches; loamy sand
Bt—9 to 36 inches; sandy loam
C—36 to 60 inches; loamy sand

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Karval and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 7 percent

*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Valent and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 3 to 10 percent
*Drainage class:* Excessively drained
*Ecological site:* Deep Sands

**Additional feature**

- Blowouts occur in areas of this map unit.

## 115—Bijou loamy sand, moist, 3 to 12 percent slopes

### *Map Unit Composition*

Bijou and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Bijou**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 3 to 12 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Low (about 5.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; loamy sand
AB—4 to 9 inches; loamy sand
Bt—9 to 36 inches; sandy loam
C—36 to 60 inches; loamy sand

**Minor components**

Ascalon and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Haxtun and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

## 116—Blakeland loamy sand, 3 to 12 percent slopes

### *Map Unit Composition*

Blakeland and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Blakeland**

*MLRA:* 67—Central High Plains
*Landform:* Dunes
*Parent material:* Eolian deposits
*Slope:* 3 to 12 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Rapid
*Available water capacity:* Low (about 4.1 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very low
*Ecological site:* Deep Sands
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 12 inches; loamy sand
C—12 to 60 inches; loamy sand

**Minor components**

Apishapa and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Ascalon and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Otero and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Truckton and similar soils
*Extent:* About 3 percent of the unit

*Slope:* 5 to 9 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

## 117—Bresser sandy loam, 1 to 5 percent slopes

### *Map Unit Composition*

Bresser and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Bresser**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Low (about 4.7 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
A—0 to 3 inches; sandy loam
Bt—3 to 13 inches; sandy clay loam
C—13 to 60 inches; loamy coarse sand

**Minor components**

Apishapa and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Haxtun and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Oterodry and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Truckton and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

## 118—Campo silt loam, 0 to 2 percent slopes

### *Map Unit Composition*

Campo and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Campo**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Plains
*Parent material:* Loess
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.2 inches)
*Shrink-swell potential:* High (about 7.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
Ap—0 to 3 inches; silt loam
Bt—3 to 15 inches; silty clay
Bk—15 to 60 inches; silt loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Fort and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent

*Drainage class:* Well drained
*Ecological site:* Salt Flat

Bacid and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

## 119—Canyon-Rock outcrop complex, 5 to 60 percent slopes

### *Map Unit Composition*

Canyon and similar soils: 55 percent
Rock outcrop: 35 percent
Minor components: 10 percent

### *Component Descriptions*

**Canyon**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Residuum weathered from calcareous sandstone
*Slope:* 5 to 60 percent
*Depth to restrictive feature:* 10 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Very low (about 1.4 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* High
*Ecological site:* Limestone Breaks
*Land capability (nonirrigated):* 7s

*Typical profile:*
A—0 to 3 inches; gravelly loam
AC—3 to 10 inches; loam
Cr—10 to 14 inches; gravelly weathered bedrock

**Rock outcrop**

*MLRA:* 67—Central High Plains
*Landform:* Escarpments
*Parent material:* Calcareous sandstone
*Slope:* 5 to 60 percent
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Land capability (nonirrigated):* 8s

**Minor components**

Eckley and similar soils
*Extent:* About 10 percent of the unit
*Slope:* 4 to 20 percent
*Drainage class:* Well drained

## 120—Colby silt loam, 1 to 3 percent slopes

### *Map Unit Composition*

Colby and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Colby**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Loess
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* High (about 10.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
Ap—0 to 5 inches; silt loam
Bk—5 to 60 inches; silt loam

**Minor components**

Keith and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Pleasant and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

Weld and similar soils
*Extent:* About 3 percent of the unit

*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Wiley and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

## 121—Colby silt loam, 3 to 12 percent slopes

### *Map Unit Composition*

Colby and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Colby**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Loess
*Slope:* 3 to 12 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* High (about 10.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Slopes
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 5 inches; silt loam
Bk—5 to 60 inches; silt loam

**Minor components**

Keith and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 10 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Kimst and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 3 to 12 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

**Additional feature**

- Some areas adjacent to streams have short steep slopes.

## 122—Colby-Weld silt loams, 1 to 5 percent slopes

### *Map Unit Composition*

Colby and similar soils: 50 percent
Weld and similar soils: 40 percent
Minor components: 10 percent

### *Component Descriptions*

**Colby**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Loess
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* High (about 10.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4e

*Typical profile:*
Ap—0 to 5 inches; silt loam
Bk—5 to 60 inches; silt loam

**Weld**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Loess
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.9 inches)

*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 3c

*Typical profile:*
A—0 to 4 inches; silt loam
Bt—4 to 19 inches; silty clay
Btk—19 to 44 inches; silty clay loam
Bk—44 to 60 inches; silt loam

**Minor components**

Keith and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Pleasant and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

Karval and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

## 123—Firstview loamy sand, 0 to 3 percent slopes

### *Map Unit Composition*

Firstview and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Firstview**

*MLRA:* 67—Central High Plains; 69—Upper Arkansas Valley Rolling Plains
*Landform:* Drainageways and fans
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Slow
*Available water capacity:* Moderate (about 7.9 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Salt Flat
*Land capability (nonirrigated):* 7s

*Typical profile:*
E—0 to 4 inches; loamy sand
Btkn1—4 to 20 inches; sandy clay loam
Btkn2—20 to 35 inches; clay
Bk—35 to 60 inches; loamy sand

**Minor components**

Olney and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Seldom and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Salt Meadow

Valent and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 3 to 20 percent
*Drainage class:* Excessively drained
*Ecological site:* Deep Sands

Vonid and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

## 124—Fort Collins loam, 1 to 3 percent slopes

### *Map Unit Composition*

Fort Collins and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Fort Collins**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.3 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)

*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 3c

*Typical profile:*
A—0 to 7 inches; loam
Bt—7 to 13 inches; clay loam
Bk1—13 to 30 inches; loam
Bk2—30 to 60 inches; loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Karval and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 125—Fort Collins loam, 3 to 5 percent slopes

### *Map Unit Composition*

Fort Collins and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Fort Collins**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.3 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4e

*Typical profile:*
A—0 to 7 inches; loam
Bt—7 to 13 inches; clay loam
Bk1—13 to 30 inches; loam
Bk2—30 to 60 inches; loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Wiley and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

## 126—Fort Collins-Karval complex, 5 to 25 percent slopes

### *Map Unit Composition*

Fort Collins and similar soils: 55 percent
Karval and similar soils: 35 percent
Minor components: 10 percent

### *Component Descriptions*

**Fort Collins**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.3 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet

*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 7 inches; loam
Bt—7 to 13 inches; clay loam
Bk1—13 to 30 inches; loam
Bk2—30 to 60 inches; loam

**Karval**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium
*Slope:* 10 to 25 percent
*Drainage class:* Excessively drained
*Slowest permeability class:* Rapid
*Available water capacity:* Very low (about 2.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Gravel Breaks
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 5 inches; gravelly loamy sand
Bk—5 to 40 inches; gravelly coarse sand
C—40 to 60 inches; coarse sand

**Minor components**

Kimst and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 12 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Vona and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

## 127—Fort Collins-Platner loams, 1 to 5 percent slopes

### *Map Unit Composition*

Fort Collins and similar soils: 50 percent
Platner and similar soils: 35 percent
Minor components: 15 percent

### *Component Descriptions*

**Fort Collins**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Hillslope position:* Summit
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.3 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4e

*Typical profile:*
A—0 to 7 inches; loam
Bt—7 to 13 inches; clay loam
Bk1—13 to 30 inches; loam
Bk2—30 to 60 inches; loam

**Platner**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.0 inches)
*Shrink-swell potential:* High (about 7.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4e

*Typical profile:*
A—0 to 7 inches; loam
Bt—7 to 15 inches; clay loam
Bk1—15 to 40 inches; silty clay loam
Bk2—40 to 60 inches; clay loam

**Minor components**

Ascalon and similar soils
*Extent:* About 3 percent of the unit

*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Colby and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Pleasant and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

Vona and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

## 128—Fort Collins-Razor, moist, complex, 5 to 15 percent slopes

### *Map Unit Composition*

Fort Collins and similar soils: 50 percent
Razor and similar soils: 40 percent
Minor components: 10 percent

### *Component Descriptions*

**Fort Collins**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.3 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 7 inches; loam
Bt—7 to 13 inches; clay loam
Bk1—13 to 30 inches; loam
Bk2—30 to 60 inches; loam

**Razor**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium and/or residuum
*Slope:* 5 to 15 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Low (about 4.7 inches)
*Shrink-swell potential:* High (about 7.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* High
*Ecological site:* Clayey Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 2 inches; clay loam
Bw—2 to 21 inches; silty clay
Bky—21 to 27 inches; silty clay
Cr—27 to 37 inches; weathered bedrock

**Minor components**

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Karval and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 5 to 15 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Midway and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 5 to 20 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Shaly Plains

Otero and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

## 129—Fort loam, 1 to 3 percent slopes

### *Map Unit Composition*

Fort and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Fort**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Plains
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
A—0 to 2 inches; loam
AB—2 to 5 inches; sandy loam
Btk—5 to 34 inches; clay loam
Bk—34 to 60 inches; silty clay loam

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Oterodry and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Wilid and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

**Additional feature**

- Some areas adjacent to streams have short steep slopes.

## 130—Fort loam, 3 to 5 percent slopes

### *Map Unit Composition*

Fort and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Fort**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4e

*Typical profile:*
A—0 to 2 inches; loam
AB—2 to 5 inches; sandy loam
Btk—5 to 34 inches; clay loam
Bk—34 to 60 inches; silty clay loam

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent

*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Oterodry and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Wilid and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 131—Fort-Karval complex, 5 to 25 percent slopes

### *Map Unit Composition*

Fort and similar soils: 55 percent
Karval and similar soils: 35 percent
Minor components: 10 percent

### *Component Descriptions*

**Fort**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* High
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 2 inches; loam
AB—2 to 5 inches; sandy loam
Btk—5 to 34 inches; clay loam
Bk—34 to 60 inches; silty clay loam

**Karval**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Alluvium
*Slope:* 10 to 25 percent
*Drainage class:* Excessively drained
*Slowest permeability class:* Rapid
*Available water capacity:* Very low (about 2.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Gravel Breaks
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 5 inches; gravelly loamy sand
Bk—5 to 40 inches; gravelly coarse sand
C—40 to 60 inches; sand

**Minor components**

Kim and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 3 to 12 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Vonid and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Gravel pits
*Extent:* About 1 percent of the unit
*Slope:* 0 to 3 percent

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

## 132—Fort-Razor complex, 5 to 15 percent slopes

### *Map Unit Composition*

Fort and similar soils: 50 percent
Razor and similar soils: 40 percent
Minor components: 10 percent

### *Component Descriptions*

**Fort**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 2 inches; loam
AB—2 to 5 inches; sandy loam
Btk—5 to 34 inches; clay loam
Bk—34 to 60 inches; silty clay loam

**Razor**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Alluvium and/or residuum
*Slope:* 5 to 15 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Low (about 4.7 inches)
*Shrink-swell potential:* High (about 7.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* High
*Ecological site:* Alkaline Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 2 inches; clay loam
Bw—2 to 21 inches; silty clay
Bky—21 to 27 inches; silty clay
Cr—27 to 37 inches; weathered bedrock

**Minor components**

Midway and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 5 to 40 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Shaly Plains

Oterodry and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Apishapa and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

## 133—Haversid silt loam, 0 to 3 percent slopes, rarely flooded

### *Map Unit Composition*

Haversid and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Haversid**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding frequency:* Rare
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Saline Overflow
*Land capability (nonirrigated):* 6c

*Typical profile:*
A—0 to 14 inches; silt loam
Bn—14 to 60 inches; stratified loam to clay loam

**Minor components**

Bankard and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent

*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Bottom Land

Firstview and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Salt Flat

Glenberg and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Bottom Land

Seldom and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Salt Meadow

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 134—Haverson loam, 0 to 3 percent slopes, rarely flooded

### *Map Unit Composition*

Haverson and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Haverson**

*MLRA:* 67—Central High Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 9.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding frequency:* Rare
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Overflow
*Land capability (nonirrigated):* 3e

*Typical profile:*
A1—0 to 5 inches; loam
A2—5 to 15 inches; clay loam
C—15 to 60 inches; clay loam

**Minor components**

Bankard and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Bottom Land

Glenberg and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Bottom Land

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Sampson and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Overflow

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 135—Haxtun loamy sand, 0 to 3 percent slopes

### *Map Unit Composition*

Haxtun and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Haxtun**

*MLRA:* 67—Central High Plains
*Landform:* Drainageways
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low

*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
Ap—0 to 4 inches; loamy sand
BA—4 to 17 inches; sandy loam
Bt—17 to 44 inches; sandy clay loam
Btkyb—44 to 60 inches; silt loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Ascalon and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Olnest and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

## 136—Haxtun loamy sand, dry, 0 to 3 percent slopes

### *Map Unit Composition*

Haxtun and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Haxtun**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Drainageways
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
Ap—0 to 4 inches; loamy sand
BA—4 to 17 inches; sandy loam
Bt—17 to 44 inches; sandy clay loam
Btkyb—44 to 60 inches; silt loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Ascalon and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Olney and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

## 137—Haxtun, dry-Olney loamy sands, 0 to 3 percent slopes

### *Map Unit Composition*

Haxtun and similar soils: 55 percent
Olney and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Haxtun**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Drainageways
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
Ap—0 to 4 inches; loamy sand
BA—4 to 17 inches; sandy loam
Bt—17 to 44 inches; sandy clay loam
Btkyb—44 to 60 inches; silt loam

**Olney**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Plains
*Parent material:* Eolian deposits
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 7.9 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
Ap—0 to 7 inches; loamy sand
Bt—7 to 36 inches; sandy clay loam
Bk1—36 to 46 inches; sandy clay loam
Bk2—46 to 60 inches; sandy loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Ascalon and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Oterodry and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Platner and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

## 138—Haxtun-Olnest loamy sands, 0 to 3 percent slopes

### *Map Unit Composition*

Haxtun and similar soils: 55 percent
Olnest and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Haxtun**

*MLRA:* 67—Central High Plains
*Landform:* Drainageways
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
Ap—0 to 4 inches; loamy sand
BA—4 to 17 inches; sandy loam
Bt—17 to 44 inches; sandy clay loam
Btkyb—44 to 60 inches; silt loam

**Olnest**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Eolian deposits
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 7.7 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
Ap—0 to 8 inches; loamy sand
Bt—8 to 38 inches; sandy clay loam
Bk—38 to 60 inches; loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Ascalon and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Otero and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Platner and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

**Additional feature**

- Blowouts occur in areas of this map unit.

## 139—Keith silt loam, 1 to 3 percent slopes

### *Map Unit Composition*

Keith and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Keith**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Loess
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
A—0 to 10 inches; silt loam
Btk—10 to 26 inches; silty clay loam
Bk—26 to 60 inches; silt loam

**Minor components**

Platner and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Pleasant and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

Satanta and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Wiley and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

## 140—Keith silt loam, 3 to 10 percent slopes

### *Map Unit Composition*

Keith and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Keith**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Loess
*Slope:* 3 to 10 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 10 inches; silt loam
Btk—10 to 26 inches; silty clay loam
Bk—26 to 60 inches; silt loam

**Minor components**

Pleasant and similar soils
*Extent:* About 5 percent of the unit

*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

Satanta and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Wiley and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 12 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

## 141—Kim loam, 1 to 3 percent slopes

### *Map Unit Composition*

Kim and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Kim**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Plains
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 9.4 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
A—0 to 4 inches; loam
Bk1—4 to 38 inches; loam
Bk2—38 to 60 inches; clay loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Olney and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

## 142—Kim loam, 3 to 12 percent slopes

### *Map Unit Composition*

Kim and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Kim**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 3 to 12 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 9.4 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; loam
Bk1—4 to 38 inches; loam
Bk2—38 to 60 inches; clay loam

**Minor components**

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 3 to 12 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Olney and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Vonid and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Gravel pits
*Extent:* About 1 percent of the unit
*Slope:* 0 to 3 percent

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

## 143—Kimst loam, 1 to 3 percent slopes

### *Map Unit Composition*

Kimst and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Kimst**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
Ap—0 to 5 inches; loam
Bk—5 to 60 inches; sandy clay loam

**Minor components**

Olnest and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Vona and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

## 144—Kimst loam, 3 to 12 percent slopes

### *Map Unit Composition*

Kimst and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Kimst**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 3 to 12 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 5 inches; loam
Bk—5 to 60 inches; sandy clay loam

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Karval and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 3 to 12 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Vona and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 145—Las Animas sandy loam, 0 to 3 percent slopes, occasionally flooded

### *Map Unit Composition*

Las Animas and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Las Animas**

*MLRA:* 67—Central High Plains; 69—Upper Arkansas Valley Rolling Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Poorly drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 7.1 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding frequency:* Occasional
*Depth to seasonal zone of saturation:* About 12 to 36 inches
*Runoff class:* Very low
*Ecological site:* Salt Meadow
*Land capability (nonirrigated):* 4w

*Typical profile:*
A—0 to 6 inches; sandy loam
Bg—6 to 10 inches; stratified loamy sand to sandy loam to loam
Bkyg—10 to 60 inches; stratified loamy sand to sandy loam to loam

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Bankard and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Bottom Land

Glenberg and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Bottom Land

Haversid and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Saline Overflow

Limon and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

**Additional feature**

- Some areas adjacent to streams have short steep slopes.

## 146—Limon clay, 0 to 3 percent slopes, rarely flooded

### *Map Unit Composition*

Limon and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Limon**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* High (about 9.9 inches)
*Shrink-swell potential:* High (about 7.5 LEP)
*Flooding frequency:* Rare
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Salt Flat
*Land capability (nonirrigated):* 6s

*Typical profile:*
A—0 to 6 inches; clay
By—6 to 60 inches; clay

**Minor components**

Arvada and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Haversid and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Saline Overflow

Heldt and similar soils
*Extent:* About 3 percent of the unit

*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Clayey Plains

Apishapa and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 147—Limon clay, moist, 0 to 3 percent slopes, rarely flooded

### *Map Unit Composition*

Limon and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Limon**

*MLRA:* 67—Central High Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* High (about 9.9 inches)
*Shrink-swell potential:* High (about 7.5 LEP)
*Flooding frequency:* Rare
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Salt Flat
*Land capability (nonirrigated):* 6s

*Typical profile:*
A—0 to 6 inches; clay
By—6 to 60 inches; clay

**Minor components**

Arvada and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Haverson and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Overflow

Heldt and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Clayey Plains

Manzanst and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 148—Manzanola clay loam, 1 to 5 percent slopes

### *Map Unit Composition*

Manzanola and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Manzanola**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Drainageways and fans
*Parent material:* Alluvium
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Slow
*Available water capacity:* High (about 9.9 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Alkaline Plains
*Land capability (nonirrigated):* 4e

*Typical profile:*
A—0 to 5 inches; clay loam
Bt—5 to 30 inches; clay loam
Bk—30 to 60 inches; clay loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained

*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Fort and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Razor and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 149—Manzanst clay loam, 0 to 3 percent slopes, rarely flooded

### *Map Unit Composition*

Manzanst and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Manzanst**

*MLRA:* 67—Central High Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* High (about 10.7 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding frequency:* Rare
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Overflow
*Land capability (nonirrigated):* 3e

*Typical profile:*
A—0 to 3 inches; clay loam
Bt—3 to 37 inches; clay loam
Bk—37 to 60 inches; silty clay loam

**Minor components**

Nunn and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Razor and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Clayey Plains

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 150—Manzanst clay loam, 1 to 5 percent slopes

### *Map Unit Composition*

Manzanst and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Manzanst**

*MLRA:* 67—Central High Plains
*Landform:* Drainageways and fans
*Parent material:* Alluvium
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* High (about 10.7 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Alkaline Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
A—0 to 8 inches; clay loam
Btk1—8 to 18 inches; clay loam
Btk2—18 to 40 inches; silty clay loam
By—40 to 60 inches; silty clay loam

**Minor components**

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent

*Drainage class:* Well drained
*Ecological site:* Salt Flat

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Pleasant and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

Razor and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Clayey Plains

Vona and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 151—Midway clay loam, 1 to 5 percent slopes

### *Map Unit Composition*

Midway and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Midway**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Residuum weathered from clayey shale
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Very low (about 2.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; clay loam
By—4 to 15 inches; clay loam
Cr—15 to 25 inches; weathered bedrock

**Minor components**

Fort and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Manzanola and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

Razor and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

Rock outcrop
*Extent:* About 3 percent of the unit
*Slope:* 5 to 40 percent

## 152—Midway clay loam, moist, 1 to 5 percent slopes

### *Map Unit Composition*

Midway and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Midway**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Residuum weathered from clayey shale
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)

*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Very low (about 2.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; clay loam
By—4 to 15 inches; clay loam
Cr—15 to 25 inches; weathered bedrock

**Minor components**

Fort Collins and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Manzanst and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

Razor and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Clayey Plains

Rock outcrop
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent

## 153—Midway-Razor clay loams, 5 to 15 percent slopes

### *Map Unit Composition*

Midway and similar soils: 55 percent
Razor and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Midway**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Residuum weathered from clayey shale
*Slope:* 5 to 15 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Very low (about 2.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; clay loam
By—4 to 15 inches; clay loam
Cr—15 to 25 inches; weathered bedrock

**Razor**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Alluvium and/or residuum
*Slope:* 5 to 15 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Low (about 4.7 inches)
*Shrink-swell potential:* High (about 7.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* High
*Ecological site:* Alkaline Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 2 inches; clay loam
Bw—2 to 21 inches; silty clay
Bky—21 to 27 inches; silty clay
Cr—27 to 37 inches; weathered bedrock

**Minor components**

Arvada and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 5 percent

*Drainage class:* Well drained
*Ecological site:* Salt Flat

Fort and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 6 to 15 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Rock outcrop
*Extent:* About 3 percent of the unit
*Slope:* 5 to 40 percent

## 154—Midway-Razor clay loams, moist, 5 to 15 percent slopes

### *Map Unit Composition*

Midway and similar soils: 55 percent
Razor and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Midway**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Residuum weathered from clayey shale
*Slope:* 5 to 15 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Very low (about 2.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; clay loam
By—4 to 15 inches; clay loam
Cr—15 to 25 inches; weathered bedrock

**Razor**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium and/or residuum
*Slope:* 5 to 15 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Low (about 4.7 inches)
*Shrink-swell potential:* High (about 7.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* High
*Ecological site:* Clayey Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 2 inches; clay loam
Bw—2 to 21 inches; silty clay
Bky—21 to 27 inches; silty clay
Cr—27 to 37 inches; weathered bedrock

**Minor components**

Arvada and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Fort Collins and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 6 to 15 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Rock outcrop
*Extent:* About 3 percent of the unit
*Slope:* 5 to 40 percent

## 155—Midway-Rock outcrop complex, 5 to 40 percent slopes

### *Map Unit Composition (fig. 2)*

Midway and similar soils: 55 percent



**Figure 2.—An area of Midway-Rock outcrop complex, 5 to 40 percent slopes.**

Rock outcrop: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Midway**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Residuum weathered from clayey shale
*Slope:* 5 to 40 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Very low (about 2.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; clay loam
By—4 to 15 inches; clay loam
Cr—15 to 25 inches; weathered bedrock

**Rock outcrop**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Escarpments
*Parent material:* Clayey shale
*Slope:* 5 to 40 percent
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Land capability (nonirrigated):* 8s

**Minor components**

Fort and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 6 to 15 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Manzanola and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

Razor and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

## 156—Midway-Rock outcrop complex, moist, 5 to 40 percent slopes

### *Map Unit Composition*

Midway and similar soils: 55 percent
Rock outcrop: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Midway**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Residuum weathered from clayey shale
*Slope:* 5 to 40 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Very low (about 2.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; clay loam
By—4 to 15 inches; clay loam
Cr—15 to 25 inches; weathered bedrock

**Rock outcrop**

*MLRA:* 67—Central High Plains
*Landform:* Escarpments
*Parent material:* Clayey shale
*Slope:* 5 to 40 percent
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Land capability (nonirrigated):* 8s

**Minor components**

Fort Collins and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 6 to 15 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Razor and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Clayey Plains

Terry and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 5 to 7 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

## 157—Nunn clay loam, 3 to 5 percent slopes

### *Map Unit Composition*

Nunn and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Nunn**

*MLRA:* 67—Central High Plains
*Landform:* Fans and terraces
*Parent material:* Alluvium
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 9.9 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
Ap—0 to 5 inches; clay loam
Bt—5 to 19 inches; clay
Bk—19 to 60 inches; sandy loam

**Minor components**

Fort Collins and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Platner and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Wages and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 2 to 6 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

## 158—Nunn-Sampson, rarely flooded, complex, 0 to 3 percent slopes

### *Map Unit Composition*

Nunn and similar soils: 55 percent
Sampson and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Nunn**

*MLRA:* 67—Central High Plains
*Landform:* Drainageways, fans, and terraces
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 9.9 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 3c

*Typical profile:*
Ap—0 to 5 inches; clay loam
Bt—5 to 19 inches; clay
Bk—19 to 60 inches; sandy loam

**Sampson**

*MLRA:* 67—Central High Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding frequency:* Rare
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Overflow
*Land capability (nonirrigated):* 3c

*Typical profile:*
A—0 to 7 inches; loam
Bt—7 to 36 inches; clay loam
Bk—36 to 60 inches; loam

**Minor components**

Glenberg and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Bottom Land

Rago and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Overflow

Satanta and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 1 to 3 percent

*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 159—Nunn-Sampson, rarely flooded, complex, dry, 0 to 3 percent slopes

### *Map Unit Composition*

Nunn and similar soils: 50 percent
Sampson and similar soils: 35 percent
Minor components: 15 percent

### *Component Descriptions*

**Nunn**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Drainageways, fans, and terraces
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 9.9 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
Ap—0 to 5 inches; clay loam
Bt—5 to 19 inches; clay
Bk—19 to 60 inches; sandy loam

**Sampson**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding frequency:* Rare
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Saline Overflow
*Land capability (nonirrigated):* 4c

*Typical profile:*
A—0 to 7 inches; loam
Bt—7 to 36 inches; clay loam
Bk—36 to 60 inches; loam

**Minor components**

Glenberg and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Bottom Land

Rago and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Overflow

Satanta and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

## 160—Olnest loamy sand, 1 to 5 percent slopes

### *Map Unit Composition*

Olnest and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Olnest**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 7.7 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
Ap—0 to 8 inches; loamy sand

Bt—8 to 38 inches; sandy clay loam
Bk—38 to 60 inches; loam

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Haxtun and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Otero and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Vona and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

**Additional feature**

- Blowouts occur in areas of this map unit.

## 161—Olnest sandy loam, 1 to 3 percent slopes

### *Map Unit Composition*

Olnest and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Olnest**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Eolian deposits
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 8.1 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
Ap—0 to 8 inches; sandy loam
Bt—8 to 38 inches; sandy clay loam
Bk—38 to 60 inches; loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Vona and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

## 162—Olnest sandy loam, 3 to 5 percent slopes

### *Map Unit Composition*

Olnest and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Olnest**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 8.1 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4e

*Typical profile:*
Ap—0 to 8 inches; sandy loam
Bt—8 to 38 inches; sandy clay loam
Bk—38 to 60 inches; loam

**Minor components**

Apishapa and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Ascalon and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Vona and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

## 163—Olnest sandy loam, 5 to 12 percent slopes

### *Map Unit Composition*

Olnest and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Olnest**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 5 to 12 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 8.1 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 8 inches; sandy loam
Bt—8 to 38 inches; sandy clay loam
Bk—38 to 60 inches; loam

**Minor components**

Arvada and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Ascalon and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Vona and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

## 164—Olney loamy sand, 1 to 5 percent slopes

### *Map Unit Composition*

Olney and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Olney**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 7.9 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
Ap—0 to 7 inches; loamy sand
Bt—7 to 36 inches; sandy clay loam
Bk1—36 to 46 inches; sandy clay loam
Bk2—46 to 60 inches; sandy loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Ascalon and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Haxtun and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Vonid and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

**Additional feature**

- Blowouts occur in areas of this map unit.

## 165—Olney sandy loam, 1 to 3 percent slopes

### *Map Unit Composition*

Olney and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Olney**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Plains
*Parent material:* Eolian deposits
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 7.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
A—0 to 4 inches; sandy loam
Bt—4 to 18 inches; sandy clay loam
Bk1—18 to 31 inches; sandy loam
Bk2—31 to 60 inches; loamy sand

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Oterodry and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Vonid and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

**Additional features**

- Blowouts occur in areas of this map unit.
- Some areas adjacent to streams have short steep slopes.

## 166—Olney sandy loam, 3 to 5 percent slopes

### *Map Unit Composition*

Olney and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Olney**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 3 to 5 percent

*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 7.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4e

*Typical profile:*
A—0 to 4 inches; sandy loam
Bt—4 to 18 inches; sandy clay loam
Bk1—18 to 31 inches; sandy loam
Bk2—31 to 60 inches; loamy sand

**Minor components**

Apishapa and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Vonid and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Gravel pits
*Extent:* About 1 percent of the unit
*Slope:* 0 to 3 percent

## 167—Olney sandy loam, 5 to 12 percent slopes

### *Map Unit Composition*

Olney and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Olney**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 5 to 12 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 7.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; sandy loam
Bt—4 to 18 inches; sandy clay loam
Bk1—18 to 31 inches; sandy loam
Bk2—31 to 60 inches; loamy sand

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Karval and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 12 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Vonid and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 168—Olney-Midway complex, 3 to 12 percent slopes

### *Map Unit Composition*

Olney and similar soils: 55 percent
Midway and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Olney**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 3 to 12 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 7.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; sandy loam
Bt—4 to 18 inches; sandy clay loam
Bk1—18 to 31 inches; sandy loam
Bk2—31 to 60 inches; loamy sand

**Midway**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Residuum weathered from clayey shale
*Slope:* 3 to 12 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Very low (about 2.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; clay loam
By—4 to 15 inches; clay loam
Cr—15 to 25 inches; weathered bedrock

**Minor components**

Fort and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Razor and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

Vonid and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 169—Otero sandy loam, 1 to 5 percent slopes

### *Map Unit Composition*

Otero and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Otero**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.2 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)

*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4e

*Typical profile:*
Ap—0 to 13 inches; sandy loam
Bk—13 to 60 inches; sandy loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Fort Collins and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Vona and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

**Additional feature**

- Blowouts occur in areas of this map unit.

## 170—Oterodry fine sandy loam, 1 to 5 percent slopes

### *Map Unit Composition*

Oterodry and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Oterodry**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 7.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4e

*Typical profile:*
A—0 to 11 inches; fine sandy loam
Bk—11 to 60 inches; fine sandy loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Fort and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Vonid and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

## 171—Oterodry fine sandy loam, 5 to 9 percent slopes

### *Map Unit Composition*

Oterodry and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Oterodry**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 7.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 11 inches; fine sandy loam
Bk—11 to 60 inches; fine sandy loam

**Minor components**

Ascalon and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Olney and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Valent and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 3 to 20 percent
*Drainage class:* Excessively drained
*Ecological site:* Deep Sands

Vonid and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

**Additional feature**

- Blowouts occur in areas of this map unit.

## 172—Platner loam, 0 to 3 percent slopes

### *Map Unit Composition*

Platner and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Platner**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.0 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 3c
*Typical profile:*
A—0 to 7 inches; loam
Bt—7 to 15 inches; clay loam
Bk1—15 to 40 inches; silty clay loam
Bk2—40 to 60 inches; clay loam

**Minor components**

Ascalon and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Fort Collins and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Otero and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Pleasant and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

## 173—Platner-Ascalon complex, 0 to 3 percent slopes

### *Map Unit Composition*

Platner and similar soils: 50 percent
Ascalon and similar soils: 35 percent
Minor components: 15 percent

### *Component Descriptions*

**Platner**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.0 inches)
*Shrink-swell potential:* High (about 7.5 LEP)

*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 3c

*Typical profile:*
A—0 to 7 inches; loam
Bt—7 to 15 inches; clay loam
Bk1—15 to 40 inches; silty clay loam
Bk2—40 to 60 inches; clay loam

**Ascalon**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Eolian deposits
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 3c

*Typical profile:*
Ap—0 to 4 inches; sandy loam
Bt—4 to 15 inches; sandy clay loam
Bk—15 to 60 inches; fine sandy loam

**Minor components**

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Haxtun and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Olnest and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Otero and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Pleasant and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

## 174—Pleasant loam, 0 to 1 percent slopes, rarely ponded

### *Map Unit Composition*

Pleasant and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Pleasant**

*MLRA:* 67—Central High Plains
*Landform:* Depressions
*Parent material:* Alluvium
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Slowest permeability class:* Slow
*Available water capacity:* High (about 10.6 inches)
*Shrink-swell potential:* High (about 7.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* At the surface
*Ponding frequency:* Rare
*Runoff class:* Low
*Ecological site:* Plains Swale
*Land capability (nonirrigated):* 4w

*Typical profile:*
A—0 to 2 inches; loam
Bt—2 to 40 inches; clay
C—40 to 60 inches; silty clay loam

**Minor components**

Rago and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Overflow

Sampson and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Overflow

**Additional feature**

- Some areas adjacent to streams have short steep slopes.

## 175—Rago silt loam, 0 to 2 percent slopes, rarely flooded

### *Map Unit Composition*

Rago and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Rago**

*MLRA:* 67—Central High Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Slowest permeability class:* Slow
*Available water capacity:* High (about 10.5 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding frequency:* Rare
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Overflow
*Land capability (nonirrigated):* 3c

*Typical profile:*
Ap—0 to 10 inches; silt loam
Btkb—10 to 47 inches; silty clay
Bk—47 to 60 inches; silt loam

**Minor components**

Keith and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Pleasant and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

**Additional feature**

- Some areas adjacent to streams have short steep slopes.

## 176—Rago silt loam, dry, 0 to 2 percent slopes, rarely flooded

### *Map Unit Composition*

Rago and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Rago**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Slowest permeability class:* Slow
*Available water capacity:* High (about 10.5 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding frequency:* Rare
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Saline Overflow
*Land capability (nonirrigated):* 4c

*Typical profile:*
Ap—0 to 10 inches; silt loam
Btkb—10 to 47 inches; silty clay
Bk—47 to 60 inches; silt loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Keith and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

**Additional feature**

- Some areas adjacent to streams have short steep slopes.

## 177—Razor clay loam, 1 to 5 percent slopes

### *Map Unit Composition*

Razor and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Razor**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Alluvium and/or residuum
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Low (about 4.5 inches)
*Shrink-swell potential:* High (about 7.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* High
*Ecological site:* Alkaline Plains
*Land capability (nonirrigated):* 6s

*Typical profile:*
A—0 to 2 inches; clay loam
Bw—2 to 15 inches; silty clay
Bky—15 to 27 inches; silty clay
Cr—27 to 37 inches; weathered bedrock

**Minor components**

Arvada and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Fort and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Midway and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Shaly Plains

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

## 178—Razor clay loam, moist, 1 to 5 percent slopes

### *Map Unit Composition*

Razor and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Razor**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium and/or residuum
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Low (about 4.5 inches)
*Shrink-swell potential:* High (about 7.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* High
*Ecological site:* Clayey Plains
*Land capability (nonirrigated):* 6s

*Typical profile:*
A—0 to 2 inches; clay loam
Bw—2 to 15 inches; silty clay
Bky—15 to 27 inches; silty clay
Cr—27 to 37 inches; weathered bedrock

**Minor components**

Arvada and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Fort Collins and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Midway and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)

*Drainage class:* Well drained
*Ecological site:* Shaly Plains

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

## 179—Sampson loam, 0 to 2 percent slopes, rarely flooded

### *Map Unit Composition*

Sampson and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Sampson**

*MLRA:* 67—Central High Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding frequency:* Rare
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Overflow
*Land capability (nonirrigated):* 3c

*Typical profile:*
A—0 to 7 inches; loam
Bt—7 to 36 inches; clay loam
Bk—36 to 60 inches; loam

**Minor components**

Apishapa and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Fort Collins and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Vona and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 180—Sampson loam, dry, 0 to 2 percent slopes, rarely flooded

### *Map Unit Composition*

Sampson and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Sampson**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding frequency:* Rare
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Saline Overflow
*Land capability (nonirrigated):* 4c

*Typical profile:*
A—0 to 7 inches; loam
Bt—7 to 36 inches; clay loam
Bk—36 to 60 inches; loam

**Minor components**

Fort and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Satanta and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

**Additional feature**

- Some areas adjacent to streams have short steep slopes.

## 181—Satanta loam, 1 to 3 percent slopes

### *Map Unit Composition*

Satanta and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Satanta**

*MLRA:* 67—Central High Plains
*Landform:* Terraces
*Parent material:* Fine-loamy eolian deposits over fine-loamy alluvium
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 9.9 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 3c

*Typical profile:*
A—0 to 4 inches; loam
Bt—4 to 19 inches; loam
Bk1—19 to 28 inches; loam
Bk2—28 to 60 inches; loam

**Minor components**

Pleasant and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

Sampson and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Overflow

## 182—Satanta loam, dry, 1 to 3 percent slopes

### *Map Unit Composition*

Satanta and similar soils: 90 percent
Minor components: 10 percent

### *Component Descriptions*

**Satanta**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Terraces
*Parent material:* Fine-loamy eolian deposits over fine-loamy alluvium
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 9.9 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
A—0 to 4 inches; loam
Bt—4 to 19 inches; loam
Bk1—19 to 28 inches; loam
Bk2—28 to 60 inches; loam

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Oterodry and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Sampson and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 2 percent

*Drainage class:* Well drained
*Ecological site:* Overflow

## 183—Seldom sandy loam, 0 to 3 percent slopes, rarely flooded

### *Map Unit Composition*

Seldom and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Seldom**

*MLRA:* 67—Central High Plains; 69—Upper Arkansas Valley Rolling Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 7.4 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding frequency:* Rare
*Depth to seasonal zone of saturation:* About 6 to 24 inches
*Runoff class:* Low
*Ecological site:* Salt Meadow
*Land capability (nonirrigated):* 3e

*Typical profile:*
A1—0 to 7 inches; sandy loam
A2—7 to 15 inches; sandy loam
Bkg1—15 to 42 inches; sandy loam
Bkg2—42 to 60 inches; stratified sandy loam to sandy clay loam

**Minor components**

Bankard and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Bottom Land

Firstview and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Salt Flat

Haversid and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Saline Overflow

Las Animas and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Poorly drained
*Ecological site:* Salt Meadow

**Additional feature**

- Some areas adjacent to streams have short steep slopes.

## 184—Shingle-Midway complex, 1 to 9 percent slopes

### *Map Unit Composition*

Shingle and similar soils: 55 percent
Midway and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Shingle**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Residuum
*Slope:* 1 to 9 percent
*Depth to restrictive feature:* 10 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Very low (about 2.7 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 4 inches; silty clay loam
Bk—4 to 15 inches; silty clay loam
Cr—15 to 25 inches; weathered bedrock

**Midway**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Residuum weathered from clayey shale
*Slope:* 1 to 9 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained

*Slowest permeability class:* Very slow
*Available water capacity:* Very low (about 2.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; clay loam
By—4 to 15 inches; clay loam
Cr—15 to 25 inches; weathered bedrock

**Minor components**

Manzanola and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

Wilid and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Razor and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

## 185—Shingle-Midway complex, moist, 1 to 9 percent slopes

### *Map Unit Composition*

Shingle and similar soils: 55 percent
Midway and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Shingle**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Residuum
*Slope:* 1 to 9 percent
*Depth to restrictive feature:* 10 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Very low (about 2.7 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 4 inches; silty clay loam
Bk—4 to 15 inches; silty clay loam
Cr—15 to 25 inches; weathered bedrock

**Midway**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Residuum weathered from clayey shale
*Slope:* 1 to 9 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Very low (about 2.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; clay loam
By—4 to 15 inches; clay loam
Cr—15 to 25 inches; weathered bedrock

**Minor components**

Manzanst and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

Wiley and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 12 percent

*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Razor and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Clayey Plains

## 186—Sundance loamy sand, 1 to 3 percent slopes

### *Map Unit Composition*

Sundance and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Sundance**

*MLRA:* 67—Central High Plains; 69—Upper Arkansas Valley Rolling Plains
*Landform:* Plains
*Parent material:* Eolian deposits over loess
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4e

*Typical profile:*
Ap—0 to 8 inches; loamy sand
Bt—8 to 17 inches; sandy loam
2Bt—17 to 28 inches; clay loam
2C—28 to 84 inches; silt loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Valent and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 20 percent
*Drainage class:* Excessively drained
*Ecological site:* Deep Sands

Vonid and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

## 187—Table Mountain loam, 0 to 2 percent slopes, rarely flooded

### *Map Unit Composition*

Table Mountain and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Table Mountain**

*MLRA:* 67—Central High Plains
*Landform:* Flood plains
*Parent material:* Alluvium
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* High (about 9.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding frequency:* Rare
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Overflow
*Land capability (nonirrigated):* 3c

*Typical profile:*
Ap—0 to 6 inches; loam
Bw—6 to 29 inches; clay loam
BC—29 to 60 inches; loam

**Minor components**

Sampson and similar soils
*Extent:* About 10 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Overflow

Orsa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat excessively drained

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 188—Travessilla-Rock outcrop complex, 6 to 60 percent slopes

### *Map Unit Composition*

Travessilla and similar soils: 60 percent
Rock outcrop: 25 percent
Minor components: 15 percent

### *Component Descriptions*

**Travessilla**

*MLRA:* 67—Central High Plains; 69—Upper Arkansas Valley Rolling Plains
*Landform:* Escarpments
*Parent material:* Residuum weathered from sandstone
*Slope:* 6 to 60 percent
*Depth to restrictive feature:* 4 to 20 inches to bedrock (lithic)
*Drainage class:* Well drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Very low (about 1.3 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Sandstone Breaks
*Land capability (nonirrigated):* 7e

*Typical profile:*
A—0 to 3 inches; sandy loam
Bw—3 to 13 inches; gravelly sandy loam
R—13 to 23 inches; unweathered bedrock

**Rock outcrop**

*MLRA:* 67—Central High Plains; 69—Upper Arkansas Valley Rolling Plains
*Landform:* Escarpments
*Parent material:* Sandstone
*Slope:* 6 to 60 percent
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Land capability (nonirrigated):* 8s

**Minor components**

Fort Collins and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Midway and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 40 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Shaly Plains

Valent and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 20 percent
*Drainage class:* Excessively drained
*Ecological site:* Deep Sands

## 189—Truckton sandy loam, 1 to 5 percent slopes

### *Map Unit Composition*

Truckton and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Truckton**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Low (about 4.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
A—0 to 6 inches; sandy loam
Bt—6 to 16 inches; sandy loam
C—16 to 60 inches; loamy coarse sand

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Ascalon and similar soils
*Extent:* About 4 percent of the unit

*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Haxtun and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Otero and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

**Additional feature**

- Blowouts occur in areas of this map unit.

## 190—Truckton sandy loam, 5 to 9 percent slopes

### *Map Unit Composition*

Truckton and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Truckton**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 5 to 9 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Low (about 4.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 6 inches; sandy loam
Bt—6 to 16 inches; sandy loam
C—16 to 60 inches; loamy coarse sand

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Ascalon and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Haxtun and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Otero and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Valent and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 3 to 20 percent
*Drainage class:* Excessively drained
*Ecological site:* Deep Sands

## 191—Truckton sandy loam, dry, 1 to 5 percent slopes

### *Map Unit Composition*

Truckton and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Truckton**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Low (about 4.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
A—0 to 6 inches; sandy loam
Bt—6 to 16 inches; sandy loam
C—16 to 60 inches; loamy coarse sand

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Bresser and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Haxtun and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Oterodry and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

## 192—Truckton sandy loam, dry, 5 to 9 percent slopes

### *Map Unit Composition*

Truckton and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Truckton**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 5 to 9 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Low (about 4.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 6 inches; sandy loam
Bt—6 to 16 inches; sandy loam
C—16 to 60 inches; loamy coarse sand

**Minor components**

Bresser and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Haxtun and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Karval and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Valent and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 9 percent
*Drainage class:* Excessively drained
*Ecological site:* Deep Sands

## 193—Valent sand, 3 to 20 percent slopes

### *Map Unit Composition*

Valent and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Valent**

*MLRA:* 67—Central High Plains; 69—Upper Arkansas Valley Rolling Plains
*Landform:* Dunes
*Parent material:* Eolian deposits
*Slope:* 3 to 20 percent
*Drainage class:* Excessively drained
*Slowest permeability class:* Rapid

*Available water capacity:* Low (about 4.1 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Deep Sands
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 3 inches; sand
C—3 to 60 inches; sand

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Olnest and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Vona and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Gravel pits
*Extent:* About 2 percent of the unit
*Slope:* 0 to 3 percent

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

**Additional feature**

- Blowouts occur in areas of this map unit.

## 194—Valent-Bijou complex, 1 to 12 percent slopes

### *Map Unit Composition*

Valent and similar soils: 55 percent
Bijou and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Valent**

*MLRA:* 67—Central High Plains; 69—Upper Arkansas Valley Rolling Plains
*Landform:* Dunes
*Parent material:* Eolian deposits
*Slope:* 1 to 12 percent
*Drainage class:* Excessively drained
*Slowest permeability class:* Rapid
*Available water capacity:* Low (about 4.1 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Deep Sands
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 3 inches; sand
C—3 to 60 inches; sand

**Bijou**

*MLRA:* 67—Central High Plains; 69—Upper Arkansas Valley Rolling Plains
*Landform:* Interdunes
*Parent material:* Eolian deposits
*Slope:* 1 to 12 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Low (about 5.5 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; loamy sand
AB—4 to 9 inches; loamy sand
Bt—9 to 36 inches; sandy loam
C—36 to 60 inches; loamy sand

**Minor components**

Apishapa and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Olnest and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Otero and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Truckton and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Gravel pits
*Extent:* About 1 percent of the unit
*Slope:* 0 to 3 percent

**Additional feature**

- Blowouts occur in areas of this map unit.

## 195—Valent-Vona complex, 3 to 25 percent slopes

### *Map Unit Composition*

Valent and similar soils: 60 percent
Vona and similar soils: 30 percent
Minor components: 10 percent

### *Component Descriptions*

**Valent**

*MLRA:* 67—Central High Plains
*Landform:* Dunes
*Parent material:* Eolian deposits
*Slope:* 3 to 25 percent
*Drainage class:* Excessively drained
*Slowest permeability class:* Rapid
*Available water capacity:* Low (about 4.1 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Deep Sands
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 3 inches; sand
C—3 to 60 inches; sand

**Vona**

*MLRA:* 67—Central High Plains
*Landform:* Interdunes
*Parent material:* Eolian deposits
*Slope:* 3 to 15 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.1 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 7 inches; loamy sand
Bt—7 to 16 inches; sandy loam
Bk1—16 to 25 inches; sandy loam
Bk2—25 to 60 inches; loamy sand

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Haxtun and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Gravel pits
*Extent:* About 1 percent of the unit
*Slope:* 0 to 3 percent

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

**Additional feature**

- Blowouts occur in areas of this map unit.

## 196—Valent-Vonid complex, 3 to 25 percent slopes

### *Map Unit Composition*

Valent and similar soils: 55 percent
Vonid and similar soils: 35 percent
Minor components: 10 percent

### *Component Descriptions*

**Valent**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Dunes
*Parent material:* Eolian deposits
*Slope:* 3 to 25 percent
*Drainage class:* Excessively drained
*Slowest permeability class:* Rapid
*Available water capacity:* Low (about 4.1 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Deep Sands
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 3 inches; sand
C—3 to 60 inches; sand

**Vonid**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Interdunes
*Parent material:* Eolian deposits
*Slope:* 3 to 15 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 6 inches; loamy sand
Bt—6 to 34 inches; sandy loam
Bk1—34 to 52 inches; sandy loam
Bk2—52 to 60 inches; sandy loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Haxtun and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

**Additional feature**

- Blowouts occur in areas of this map unit.

## 197—Vona loamy sand, 1 to 9 percent slopes

### *Map Unit Composition*

Vona and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Vona**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 1 to 9 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.1 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 7 inches; loamy sand
Bt—7 to 16 inches; sandy loam
Bk1—16 to 25 inches; sandy loam
Bk2—25 to 60 inches; loamy sand

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent

*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Fort Collins and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Valent and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 20 percent
*Drainage class:* Excessively drained
*Ecological site:* Deep Sands

**Additional feature**

- Blowouts occur in areas of this map unit.

## 198—Vona sandy loam, 1 to 5 percent slopes

### *Map Unit Composition*

Vona and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Vona**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.4 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
Ap—0 to 7 inches; sandy loam
Bt—7 to 16 inches; sandy loam
Bk1—16 to 25 inches; sandy loam
Bk2—25 to 60 inches; loamy sand

**Minor components**

Apishapa and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Fort Collins and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Kimst and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

**Additional feature**

- Blowouts occur in areas of this map unit.

## 199—Vona sandy loam, 5 to 12 percent slopes

### *Map Unit Composition*

Vona and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Vona**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 5 to 12 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.4 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 7 inches; sandy loam
Bt—7 to 16 inches; sandy loam
Bk1—16 to 25 inches; sandy loam
Bk2—25 to 60 inches; loamy sand

**Minor components**

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Fort Collins and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 6 to 15 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Otero and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Gravel pits
*Extent:* About 1 percent of the unit
*Slope:* 0 to 3 percent

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

**Additional features**

- Blowouts occur in areas of this map unit.
- Some areas adjacent to streams have short steep slopes.

## 200—Vona-Karval-Midway, moist, complex, 5 to 25 percent slopes

### *Map Unit Composition*

Vona and similar soils: 35 percent
Karval and similar soils: 30 percent
Midway and similar soils: 20 percent
Minor components: 15 percent

### *Component Descriptions*

**Vona**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 5 to 10 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.4 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 7 inches; sandy loam
Bt—7 to 16 inches; sandy loam
Bk1—16 to 25 inches; sandy loam
Bk2—25 to 60 inches; loamy sand

**Karval**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium
*Slope:* 10 to 25 percent
*Drainage class:* Excessively drained
*Slowest permeability class:* Rapid
*Available water capacity:* Very low (about 2.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Gravel Breaks
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 5 inches; gravelly loamy sand
Bk—5 to 40 inches; gravelly coarse sand
C—40 to 60 inches; sand

**Midway**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Residuum weathered from clayey shale
*Slope:* 10 to 25 percent

*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Very low (about 2.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; clay loam
By—4 to 15 inches; clay loam
Cr—15 to 25 inches; weathered bedrock

**Minor components**

Arvada and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Razor and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Clayey Plains

Rock outcrop
*Extent:* About 3 percent of the unit
*Slope:* 5 to 40 percent

Valent and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 3 to 20 percent
*Drainage class:* Excessively drained
*Ecological site:* Deep Sands

Gravel pits
*Extent:* About 1 percent of the unit
*Slope:* 0 to 3 percent

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 201—Vona-Midway, moist, complex, 3 to 12 percent slopes

### *Map Unit Composition*

Vona and similar soils: 55 percent
Midway and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Vona**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 3 to 12 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.4 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 7 inches; sandy loam
Bt—7 to 16 inches; sandy loam
Bk1—16 to 25 inches; sandy loam
Bk2—25 to 60 inches; loamy sand

**Midway**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Residuum weathered from clayey shale
*Slope:* 3 to 12 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Very low (about 2.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; clay loam
By—4 to 15 inches; clay loam
Cr—15 to 25 inches; weathered bedrock

**Minor components**

Karval and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 6 to 15 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Olnest and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Otero and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Razor and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Clayey Plains

## 202—Vona-Seldom sandy loams, 3 to 25 percent slopes

### *Map Unit Composition*

Vona and similar soils: 60 percent
Seldom and similar soils: 20 percent
Minor components: 20 percent

### *Component Descriptions*

**Vona**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 3 to 25 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.4 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 7 inches; sandy loam
Bt—7 to 16 inches; sandy loam
Bk1—16 to 25 inches; sandy loam
Bk2—25 to 60 inches; loamy sand

**Seldom**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 3 to 25 percent
*Drainage class:* Somewhat poorly drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 7.4 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* About 6 to 24 inches
*Runoff class:* High
*Ecological site:* Wet Meadow
*Land capability (nonirrigated):* 6e

*Typical profile:*
A1—0 to 7 inches; sandy loam
A2—7 to 15 inches; sandy loam
Bkg1—15 to 42 inches; sandy loam
Bkg2—42 to 60 inches; stratified sandy loam to sandy clay loam

**Minor components**

Midway and similar soils
*Extent:* About 10 percent of the unit
*Slope:* 5 to 40 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Shaly Plains

Fort Collins and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Manzanst and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

Razor and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Clayey Plains

## 203—Vonid loamy sand, 1 to 9 percent slopes

### *Map Unit Composition*

Vonid and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Vonid**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 1 to 9 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 6 inches; loamy sand
Bt—6 to 34 inches; sandy loam
Bk1—34 to 52 inches; sandy loam
Bk2—52 to 60 inches; sandy loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Fort and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Valent and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 3 to 20 percent
*Drainage class:* Excessively drained
*Ecological site:* Deep Sands

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

**Additional feature**

- Blowouts occur in areas of this map unit.

## 204—Vonid sandy loam, 1 to 5 percent slopes

### *Map Unit Composition*

Vonid and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Vonid**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.9 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
A—0 to 6 inches; sandy loam
Bt—6 to 34 inches; sandy loam
Bk1—34 to 52 inches; sandy loam
Bk2—52 to 60 inches; sandy loam

**Minor components**

Apishapa and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Arvada and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Fort and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 3 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

**Additional feature**

- Some areas adjacent to streams have short steep slopes.

## 205—Vonid sandy loam, 5 to 12 percent slopes

### *Map Unit Composition*

Vonid and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Vonid**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 5 to 12 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.9 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 6 inches; sandy loam
Bt—6 to 34 inches; sandy loam
Bk1—34 to 52 inches; sandy loam
Bk2—52 to 60 inches; sandy loam

**Minor components**

Fort and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 6 to 15 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Oterodry and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Gravel pits
*Extent:* About 1 percent of the unit
*Slope:* 0 to 3 percent

## 206—Vonid-Karval-Midway complex, 5 to 25 percent slopes

### *Map Unit Composition*

Vonid and similar soils: 35 percent
Karval and similar soils: 30 percent
Midway and similar soils: 20 percent
Minor components: 15 percent

### *Component Descriptions*

**Vonid**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 5 to 10 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.9 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 6 inches; sandy loam
Bt—6 to 34 inches; sandy loam
Bk1—34 to 52 inches; sandy loam
Bk2—52 to 60 inches; sandy loam

**Karval**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Alluvium
*Slope:* 10 to 25 percent
*Drainage class:* Excessively drained
*Slowest permeability class:* Rapid
*Available water capacity:* Very low (about 2.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Gravel Breaks
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 5 inches; gravelly loamy sand
Bk—5 to 40 inches; gravelly coarse sand
C—40 to 60 inches; sand

**Midway**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Residuum weathered from clayey shale
*Slope:* 10 to 25 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Very low (about 2.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high
*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; clay loam
By—4 to 15 inches; clay loam
Cr—15 to 25 inches; weathered bedrock

**Minor components**

Olney and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Razor and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

Rock outcrop
*Extent:* About 2 percent of the unit
*Slope:* 5 to 40 percent

Valent and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 3 to 20 percent
*Drainage class:* Excessively drained
*Ecological site:* Deep Sands

Gravel pits
*Extent:* About 1 percent of the unit
*Slope:* 0 to 3 percent

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 207—Vonid-Midway complex, 3 to 12 percent slopes

### *Map Unit Composition*

Vonid and similar soils: 55 percent
Midway and similar soils: 30 percent
Minor components: 15 percent

### *Component Descriptions*

**Vonid**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 3 to 12 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.9 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 6 inches; sandy loam
Bt—6 to 34 inches; sandy loam
Bk1—34 to 52 inches; sandy loam
Bk2—52 to 60 inches; sandy loam

**Midway**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Residuum weathered from clayey shale
*Slope:* 3 to 12 percent
*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Slowest permeability class:* Very slow
*Available water capacity:* Very low (about 2.4 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Very high

*Ecological site:* Shaly Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; clay loam
By—4 to 15 inches; clay loam
Cr—15 to 25 inches; weathered bedrock

**Minor components**

Karval and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 6 to 15 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Olney and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 5 to 12 percent
*Drainage class:* Well drained
*Ecological site:* Sandy Plains

Oterodry and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 5 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Razor and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

## 208—Vonid-Seldom sandy loams, 3 to 25 percent slopes

### *Map Unit Composition*

Vonid and similar soils: 65 percent
Seldom and similar soils: 20 percent
Minor components: 15 percent

### *Component Descriptions*

**Vonid**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Eolian deposits
*Slope:* 3 to 25 percent
*Drainage class:* Somewhat excessively drained
*Slowest permeability class:* Moderately rapid
*Available water capacity:* Moderate (about 6.9 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Sandy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 6 inches; sandy loam
Bt—6 to 34 inches; sandy loam
Bk1—34 to 52 inches; sandy loam
Bk2—52 to 60 inches; sandy loam

**Seldom**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 3 to 25 percent
*Drainage class:* Somewhat poorly drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 7.4 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* About 6 to 24 inches
*Runoff class:* High
*Ecological site:* Wet Meadow
*Land capability (nonirrigated):* 6e

*Typical profile:*
A1—0 to 7 inches; sandy loam
A2—7 to 15 inches; sandy loam
Bkg1—15 to 42 inches; sandy loam
Bkg2—42 to 60 inches; stratified sandy loam to sandy clay loam

**Minor components**

Arvada and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Fort and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Midway and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 5 to 40 percent

*Depth to restrictive feature:* 6 to 20 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Shaly Plains

Razor and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Alkaline Plains

## 209—Wages loam, 2 to 6 percent slopes

### *Map Unit Composition*

Wages and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Wages**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 2 to 6 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4e

*Typical profile:*
A—0 to 5 inches; loam
Bt—5 to 12 inches; loam
Bk—12 to 17 inches; loam
C—17 to 60 inches; loam

**Minor components**

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Kimst and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Platner and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Pleasant and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 210—Wages loam, 6 to 12 percent slopes

### *Map Unit Composition*

Wages and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Wages**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 6 to 12 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; loam
Bt—4 to 10 inches; loam
Bk—10 to 35 inches; loam
C—35 to 60 inches; loam

**Minor components**

Karval and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 6 to 15 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Otero and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 5 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

Apishapa and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Rock outcrop
*Extent:* About 2 percent of the unit
*Slope:* 5 to 40 percent

**Additional feature**

• Some areas adjacent to streams have short steep slopes.

## 211—Wages loam, dry, 1 to 5 percent slopes

### *Map Unit Composition*

Wages and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Wages**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 1 to 5 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4e

*Typical profile:*
A—0 to 4 inches; loam
Bt—4 to 10 inches; loam
Bk—10 to 35 inches; loam
C—35 to 60 inches; loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Kim and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 12 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Platner and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Sampson and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Overflow

## 212—Wages-Karval complex, 6 to 15 percent slopes

### *Map Unit Composition*

Wages and similar soils: 60 percent
Karval and similar soils: 25 percent
Minor components: 15 percent

### *Component Descriptions*

**Wages**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium and/or eolian deposits
*Slope:* 6 to 15 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* Moderate (about 8.8 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 4 inches; loam
Bt—4 to 10 inches; loam
Bk—10 to 35 inches; loam
C—35 to 60 inches; loam

**Karval**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Alluvium
*Slope:* 6 to 15 percent
*Drainage class:* Excessively drained
*Slowest permeability class:* Rapid
*Available water capacity:* Very low (about 2.6 inches)
*Shrink-swell potential:* Low (about 1.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Gravel Breaks
*Land capability (nonirrigated):* 6e

*Typical profile:*
A—0 to 5 inches; gravelly loamy sand
Bk—5 to 40 inches; gravelly coarse sand
C—40 to 60 inches; sand

**Minor components**

Colby and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 3 to 12 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Slopes

Fort Collins and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Platner and similar soils
*Extent:* About 4 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Rock outcrop
*Extent:* About 1 percent of the unit
*Slope:* 5 to 40 percent

**Additional feature**

- Some areas adjacent to streams have short steep slopes.

## 213—Weld silt loam, 0 to 2 percent slopes

### *Map Unit Composition*

Weld and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Weld**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Loess
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.9 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 3c

*Typical profile:*
A—0 to 4 inches; silt loam
Bt—4 to 19 inches; silty clay
Btk—19 to 44 inches; silty clay loam
Bk—44 to 60 inches; silt loam

**Minor components**

Colby and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Pleasant and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Rago and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Overflow

## 214—Weld silt loam, dry, 0 to 2 percent slopes

### *Map Unit Composition*

Weld and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Weld**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Plains
*Parent material:* Loess
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.9 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
A—0 to 4 inches; silt loam
Bt—4 to 19 inches; silty clay
Btk—19 to 44 inches; silty clay loam
Bk—44 to 60 inches; silt loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Colby and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Keith and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Rago and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Overflow

## 215—Wiley silt loam, 0 to 3 percent slopes

### *Map Unit Composition*

Wiley and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Wiley**

*MLRA:* 67—Central High Plains
*Landform:* Plains
*Parent material:* Loess
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.6 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 3e

*Typical profile:*
Ap—0 to 4 inches; silt loam
Btk—4 to 23 inches; silty clay loam
C—23 to 60 inches; silt loam

**Minor components**

Arvada and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 5 percent
*Drainage class:* Well drained
*Ecological site:* Salt Flat

Colby and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Karval and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 7 percent
*Drainage class:* Excessively drained
*Ecological site:* Gravel Breaks

Pleasant and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

Vona and similar soils
*Extent:* About 3 percent of the unit

*Slope:* 1 to 9 percent
*Drainage class:* Somewhat excessively drained
*Ecological site:* Sandy Plains

## 216—Wiley silt loam, 3 to 12 percent slopes

### *Map Unit Composition*

Wiley and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Wiley**

*MLRA:* 67—Central High Plains
*Landform:* Hills
*Parent material:* Loess
*Slope:* 3 to 12 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderately slow
*Available water capacity:* High (about 10.6 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Medium
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 6e

*Typical profile:*
Ap—0 to 4 inches; silt loam
Btk—4 to 23 inches; silty clay loam
C—23 to 60 inches; silt loam

**Minor components**

Baca and similar soils
*Extent:* About 5 percent of the unit
*Geomorphic position:* Plains
*Slope:* 0 to 3 percent
*Drainage class:* Well drained

Fort Collins and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 5 to 10 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Pleasant and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 0 to 1 percent
*Drainage class:* Moderately well drained
*Ecological site:* Plains Swale

Razor and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 1 to 5 percent
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)
*Drainage class:* Well drained
*Ecological site:* Clayey Plains

## 217—Wilid silt loam, 0 to 3 percent slopes

### *Map Unit Composition (fig. 3)*

Wilid and similar soils: 85 percent
Minor components: 15 percent

### *Component Descriptions*

**Wilid**

*MLRA:* 69—Upper Arkansas Valley Rolling Plains
*Landform:* Plains
*Parent material:* Loess
*Slope:* 0 to 3 percent
*Drainage class:* Well drained
*Slowest permeability class:* Moderate
*Available water capacity:* High (about 10.6 inches)
*Shrink-swell potential:* Moderate (about 4.5 LEP)
*Flooding hazard:* None
*Depth to seasonal zone of saturation:* Greater than 6 feet
*Runoff class:* Low
*Ecological site:* Loamy Plains
*Land capability (nonirrigated):* 4c

*Typical profile:*
Ap—0 to 3 inches; silt loam
Btk—3 to 21 inches; silty clay loam
Bk—21 to 60 inches; silt loam

**Minor components**

Apishapa and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 3 percent
*Drainage class:* Somewhat poorly drained
*Ecological site:* Plains Swale

Bacid and similar soils
*Extent:* About 5 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains



**Figure 3.—Wheat in an area of Wilid silt loam, 0 to 3 percent slopes.**

Fort and similar soils
*Extent:* About 3 percent of the unit
*Slope:* 1 to 3 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

Weld and similar soils
*Extent:* About 2 percent of the unit
*Slope:* 0 to 2 percent
*Drainage class:* Well drained
*Ecological site:* Loamy Plains

## 218—Water

### *Component Description*

Water includes streams, lakes, ponds, and estuaries.

These areas are covered with water in most years, at least during the period that is warm enough for plants to grow. Many areas are covered throughout the year.

Pits, blowouts, and playas that contain water most of the time are mapped as Water.

## 219—Gravel pits

### *Component Description*

Gravel pits are open excavations from which soil and commonly underlying material have been removed, exposing either rock or other material.

## 220—Access denied

### *Component Description*

Soils information is not available on access denied areas. Permission to access these areas was not given by the owners.

# Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in table 5. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading "Detailed Soil Map Units."

# Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as rangeland and forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

## Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

### Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately well suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

### Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

## Crops

Brian C. Johnson, District Conservationist, and Dr. P. Lorenz Sutherland, Conservation Agronomist, Natural Resources Conservation Service, prepared this section.

General management needed for crops is suggested in this section. The yields of the main crops are discussed and the system of land capability classification used by the Natural Resources Conservation Service is explained.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading “Detailed Soil Map Units.” Specific information can be obtained from the local office of the

Natural Resources Conservation Service or the Cooperative Extension Service.

Agronomic management practices needed for the crops grown in Lincoln County are suggested in this section. The grain and hay crops that are best suited to the soils, including some that are not common in the survey area, are identified. Irrigated cropland acreage in the county is very small and is primarily limited to farming areas irrigated by center-pivot sprinkler methods. Only the use and management of the soils for nonirrigated crop production is discussed.

On the nonirrigated cropland in Lincoln County, the primary grain crops are winter wheat, grain sorghum (fig. 4), and millet. Proso millet and foxtail millet are grown to support an active birdseed market. Secondary crops include sunflower (fig. 5) and corn. These two crops are increasing in importance in the county as markets and management options are expanded. The primary crops grown for hay and silage are millet and sorghum-sudangrass. Alfalfa is grown on a limited basis.

Soil degradation and soil erosion are the main factors that affect the productivity and economic sustainability of the cropland in Lincoln County. Soil degradation has resulted from widespread application of fallow and tillage. This intensive use of the cropland soil resource has reduced yields primarily because of diminished organic matter and other related soil quality elements. Soil erosion from wind and water is a major resource concern. Wind erosion results in surface creep, saltation, and suspension. Interill-rill erosion and ephemeral gully formation are the main concerns resulting from water erosion. The primary effect resulting from soil erosion is reduced soil productivity. Damage to growing crops from the abrasion of blowing soil aggregates also occurs. Secondary effects of water erosion result in deposition of sediments in streams and small bodies of water.

The Best Management Practices (BMP) that address diminished soil health involve the adoption of crop rotations that provide increased intensity and diversity and offer greater yield potentials. The



**Figure 4.—Sorghum grown for hay in an area of Haxtun-Olnest loamy sands, 0 to 3 percent slopes.**



**Figure 5.—These sunflowers are part of a typical wheat-fallow system of crop rotation. Pictured is an area of Colby-Weld silt loams, 1 to 5 percent slopes.**

increased yield potentials are attributed to decreased pressure from weeds, insects, nematodes, and diseases. Nitrogen inputs from legumes, increased crop residue amounts, improved soil physical characteristics, and favorable cycling of nitrogen and carbon also increase yields. Rotation intensity assures the maximum utilization of effective precipitation and is defined by the water use of individual crops in the rotation. The crop types considered are classified into four groups; cool-season grasses (winter wheat, triticale), warm-season grasses (corn, grain sorghum), cool-season broadleaf crops (peas, canola), and warm-season broadleaf crops (sunflower, soybean). Increased diversity promotes effective nutrient cycling and decreased ecological risks associated with disease and weed populations.

For most of the soils in Lincoln County an aggressive conservation tillage system of residue management is needed to minimize soil loss, cut production costs, and maintain or increase yields. Keeping the crop residue on the surface through proper management of tillage and grazing is important. The standing and flat-oriented residues need to be managed for maximum soil surface protection. During periods when the amount of crop residue is inadequate, selecting the proper tillage tool is important in keeping the soil surface rough.

Other measures for reducing the hazard of soil blowing include stripcropping, cross wind trap strips, and herbaceous wind barriers. These practices are moderately effective in Lincoln County. These alternative practices are recommended in areas where low residue producing crops are grown or in areas where crops are harvested for hay and silage. A wind stripcropping system consists of small grains grown in strips alternating with row crops or fallow. The strips, spaced no more than 660 feet apart, are arranged at angles approximately perpendicular to the prevailing wind direction. Cross wind trap strips, made up of annual vegetation, are established to induce soil deposition. These trap strips, with minimum widths of 15 to 25 feet, can be placed at windward field edges or

immediately upwind from the area to be protected or arranged in recurring patterns between erosion susceptible strips. The most common vegetation used in the establishment of cross wind trap strips is forage sorghum or sorghum-sudangrass cultivars. Herbaceous wind barriers consist of one to two rows of annual or perennial plants planted perpendicular to the prevailing wind direction with sufficient height and porosity to reduce soil erosion. Perennial grasses suitable for use as herbaceous wind barriers include tall wheatgrass, switchgrass, big bluestem, Indiangrass, or basin wildrye.

Terrace systems are widely accepted as a BMP for field protection against water erosion. The primary purpose of terraces is to reduce slope length, thereby controlling soil erosion and increasing crop productivity. Terraces in Lincoln County are level broad base and flat channel types. Generally, the terrace ends are partly closed and storm runoff storage capacity is designed for a 10-year frequency, 24-hour rainfall event. Terraces are practical on very deep soils that have slopes of 8 percent or less. Terrace systems should be used in combination with contour farming, contour stripcropping, and crop residue management.

Soil testing is an important BMP for determining crop nutrient needs. Annual sampling of each field is suggested, particularly if more complex crop rotations are used. The nutrient recommendations should be consistent with those from the State Land Grant University or a private testing laboratory. Routine soil sampling and analyses also provides valuable information about organic matter, pH, and soil salinity. Nitrogen and phosphorus are the most limiting nutrients in the county. Sulfur is deficient in some soils, particularly sandy soils that have a low organic matter content. Measures that provide for the proper amount, timing, and placement of fertilizer greatly enhance the sustainability and economic viability while minimizing surface water contamination.

## Land Capability Classification

Land capability classification (USDA, 1961) shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

In the capability system, soils are grouped at two levels—capability class and subclass.

*Capability classes*, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use.

*Capability subclasses* are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

### Management by Nonirrigated Capability Class

In this section, each nonirrigated capability class in Lincoln County is described and the use and management of the soils are discussed.

*Class1* soils have slight limitations that restrict their use.

*Class 2* soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

*Class 3c, nonirrigated,* soils are suited to most adapted crops. They are limited mainly by occasional periods of drought. The winter wheat-fallow and millet crop sequences are best adapted to these farming areas.

Management of these soils includes an aggressive crop residue program to control runoff and soil blowing while maintaining tilth and organic matter. In areas where crop residue is inadequate, keeping the soil surface rough and cloddy can control soil blowing.

*Class 3e, nonirrigated,* soils are suited to all adapted crops. The more intense and diverse crop sequences are adaptable to the soils in this capability class. A sequence of two crops in three years, such as winter wheat-sorghum-fallow, works well in these farming areas. Sunflower, corn, or millet can be

substituted into the second year of the rotation. The summer annual crops are direct seeded (no-till) into the small grain stubble from the previous year. Mulch tillage is used during the fallow phase of the rotation for weed control and fertilizer applications. The soils in this capability class respond favorably to nitrogen and phosphorus fertilizer applications. On steeper slopes, terracing and contour planting help to control erosion.

In some areas of the county that have favorable precipitation patterns, these soils can support crop sequences that eliminate fallow. The most common sequences are millet-winter wheat and winter wheat-corn-millet. These crops are direct seeded (no-till). Measures to enhance fertilizer management programs need to be promoted.

*Class 4c, nonirrigated,* soils are suited to most adapted crops. They are limited mainly by occasional periods of drought. The winter wheat-fallow and millet sequences are the best adapted to these farming areas. Grain sorghums and other warm-season row crops are not well adapted to these soils. Keeping adequate cover on these soils is essential in areas where the hazard of soil blowing is severe and runoff potential is high.

Recommended measures for controlling the hazard of soil blowing include mulch tillage and stripcropping. On steeper slopes, terracing and contour planting help to control erosion. Management of these soils includes an aggressive crop residue program to control runoff and soil blowing while maintaining tilth and organic matter. In areas where crop residue is inadequate, keeping the soil surface rough and cloddy can control soil blowing.

*Class 4e, nonirrigated,* soils are suited to most adapted crops, but intensive care and management is needed. The hazard of soil blowing is severe. Runoff potential is high on the steeper slopes. Keeping adequate ground cover is essential. The predominant cropping sequences are winter wheat-fallow and millet. Such feed and annual hay crops as sorghum-sudangrass can be planted following hail- or wind-damaged wheat crops. These soils produce acceptable feed and forage yields (fig. 6).

Recommended measures for controlling the hazard of soil blowing include mulch tillage and stripcropping. On steeper slopes, terracing and contour planting help to control erosion.

*Class 4w, nonirrigated,* soils are suited to most adapted crops. They occur in depressions or on flood plains. Rare ponding or rare or occasional flooding limits these soils. In the absence of ponding or flooding, these soils are susceptible to the hazard of soil blowing.

Areas of cropland are farmed in a similar manner as the surrounding cropland when the soils are dry enough to support farming equipment. When tillage and planting operations are not possible, these fields serve as sources of food and cover for migrating waterfowl and other wildlife species.

*Class 6c, nonirrigated,* soils are suitable for very limited cropping. They are in the southern part of the county and are limited by periods of drought. The winter wheat-fallow sequence is the best adapted to these farming areas.

The hazard of soil blowing is severe. Runoff potential is high. Intensive management is necessary to control erosion if these soils are used as cropland. Cultivated areas should be returned to permanent vegetation.

*Class 6e, nonirrigated,* soils are suitable for very limited cropping. The hazard of soil blowing is moderate. The runoff potential is high. Intensive management is necessary to control erosion if these soils are used as cropland. Cultivated areas should be returned to permanent vegetation.

Small eroded areas of soils that were formerly cultivated are in some fields. A good cover crop producing abundant residue should be grown to stabilize these soils before they are reseeded to permanent vegetation.

*Class 7e, nonirrigated,* soils in this class are used primarily as native rangeland or for wildlife habitat. They are unsuitable for cultivated crop production. These soils are on side slopes. The hazards of wind erosion and water erosion are severe. If these soils are cultivated or over-grazed severe interill-rill erosion and gully formation can occur.

Loss of the soil surface layer through erosion severely decreases the potential for successful revegetation. In formerly cultivated fields, range seeding is a suitable practice. A good cover crop producing abundant residue should be grown to stabilize the soils before they are reseeded to permanent vegetation.

*Classes 6s and 7s, nonirrigated,* soils are not suitable for cultivation. These capability classes consist of soils that are shallow to bedrock, have low permeability, or have a high sodium adsorption ratio. Available moisture, the presence of soluble salts or exchangeable sodium, or both, are serious limitations affecting many soils in these capability classes. The runoff potential is high on the steeper slopes, resulting in severe interill-rill erosion. Also, runoff from underlying geologic materials can result in the formation of gullies on lower lying soils.

These soils are used as native rangeland, wildlife habitat, or both. Good grazing management is needed



**Figure 6.—A dryland wheat field that has been established to native warm- and cool-season grasses under the Conservation Reserve Program. This area is in land capability class 4e.**

to maintain and improve the production of the native grass, shrub, and forb species.

*Class 8* soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

The capability classification of map units in this survey area is given in the section "Detailed Soil Map Units" and in table 6.

### Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 6. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include erosion control and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, manure, and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for each of the principal crops.

Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 6 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

The *general crop production index*, table 7, is a relative rating of the capacity of a soil to produce a specific plant under a defined management system. The index is determined from yield data on a few benchmark soils and is used to calculate yields, the net returns from crops, land assessment values, taxes, and to perform risk analysis when land management decisions are made.

## Rangeland

Ben P. Berlinger, Rangeland Management Specialist, Natural Resources Conservation Service, helped prepare this section.

Rangeland is defined as a kind of land on which the native vegetation consists of grasses, grass-like plants, forbs, and shrubs, and where routine management is accomplished through the application of ecological principles. In areas that have similar climate and topography, differences in the kind and amount of rangeland are closely related to the kind of soil. Effective management is based on the relationship between the soils and vegetation.

About 64 percent of Lincoln County is rangeland. The rangeland in the county is classified as short-grass prairie and sand sagebrush mixed-grass prairie of the Central High Plains and Upper Arkansas Valley Rolling Plains Major Land Resource Areas (MLRAs). The cow-calf-yearling enterprise is the dominant type of ranching. The ranches are intermingled with cropland. Many ranches supplement range forage with wheat pasture. During the winter the range forage is commonly supplemented with a protein concentrate.

Table 8 shows, for each soil that supports vegetation suitable for grazing, the ecological site; the total annual production of vegetation in favorable, normal, and unfavorable years; the characteristic vegetation; and the average percentage of each species. An explanation of the column headings in table 8 follows.

An *ecological site* is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of the site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production. Descriptions of ecological sites are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service.

*Total dry-weight production* is the amount of vegetation that can be expected to grow annually in a well managed area that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

*Characteristic vegetation*—the grasses, forbs, and shrubs that make up most of the potential natural plant community on each soil—is listed by common name. Under *maximum rangeland composition*, the expected percentage of the total annual production is given for each species making up the characteristic vegetation. The amount that can be used as forage depends on the kinds of grazing animals and on the grazing season.

Range management requires a knowledge of the kinds of soil and of the potential natural plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the reference plant community on a particular rangeland ecological site. The reference plant community can be the historical climax plant community or any of the vegetative states identified for a particular ecological site. The more closely the existing community resembles the

reference community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural plant community. Further information about the range similarity index and rangeland trend is available in chapter 4 of the "National Range and Pasture Handbook," which is available in local offices of the Natural Resources Conservation Service.

The objective in range management is to manage grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

Rangeland management based on soil survey information and rangeland inventories can increase forage production and lead to improved rangeland health. This is achieved most economically by applying the tools of grazing, animal impact, and rest. This will benefit the four ecosystem foundation blocks; mineral cycle, water cycle, energy flow, and community succession. Prescribed grazing is the major management need. With prescribed grazing, the frequency and intensity of grazing, as well as the opportunity for plants to recover from grazing, are controlled so that the kinds and amounts of plants that make up the desired plant community are reestablished and maintained in a healthy condition.

Prescribed grazing, or the application of a planned grazing system, improves the condition of a range site and enhances wildlife habitat. Deferment is the postponement of grazing during part or all of the growing season of key forage plants. Rotating deferment among several fields improves the entire rangeland unit. It allows the forage plants to grow to an adequate height before they are grazed and thus helps to replenish root food reserves and develop mature seed. Fencing, developing water areas, and distributing salt areas may be necessary to help achieve a more uniform distribution of grazing.

Range seeding may be necessary to improve seriously depleted rangeland. Sandy soils can be seeded by the rangeland interseeder method, which reduces the hazard of erosion. Loamy soils can be seeded most successfully by drilling the grass seed into a preparatory warm-season stubble cover of sorghum or sudan. The best time for range seeding in this survey area is mid-November through mid-April. Brush management is effective where competing shrubs, such as sand sagebrush, have significantly increased in abundance. Prescribed grazing will be mandatory following brush management to allow for the improvement of the ecological conditions and to prevent the brush species from increasing.

Ecological deterioration as a result of improper grazing management is described for the dominant ecological sites in Lincoln County.

Retrogression of the Loamy Plains (fig. 7) and Loamy Slopes ecological sites leads to a decrease in the relative abundance of such plants as western wheatgrass, green needlegrass, needleandthread, and sideoats grama with a corresponding increase of blue grama, buffalograss, galleta, red threeawn, and sand dropseed. Continued mismanagement results in these sites becoming dominated by a sodbound condition of blue grama and buffalograss with minor amounts of undesirable plants, such as broom snakeweed and plains pricklypear cactus.

Retrogression of the Clayey Plains, Alkaline Plains, Shaly Plains (fig. 8), Sandy Salt Flat, and Salt Flat (fig. 9) ecological sites results in a decrease in the relative abundance of such plants as western wheatgrass, green needlegrass, alkali sacaton, and switchgrass. Important shrubs, such as fourwing saltbush and winterfat, are very palatable and can be completely grazed out by continuous season-long grazing. The major plants that increase in relative abundance are blue grama, buffalograss, red threeawn, sand dropseed, broom snakeweed, and plains pricklypear. Continued deterioration of blue grama and buffalograss results in a low producing sodbound condition on the Clayey Plains site. Continued site degradation of the Shaly Plains and Salt Flat sites results in large areas of bare soil with little plant cover.

Retrogression of the Sandy Plains, Deep Sands, and Sandy Bottomland ecological sites results in an immediate decrease in the relative abundance of such plants as sand bluestem, prairie sandreed, needleandthread, switchgrass, yellow Indiangrass, little bluestem, sideoats grama, Bessey sandcherry, and leadplant amorpha. Sand dropseed, blue grama, sand sagebrush, blowout grass, and western ragweed are the principal increaser species. If further deterioration takes place, annual buckwheat, sand verbena, redthreeawn, and other annual forbs, along with the increaser species, dominate these sites. Blowout areas can readily start on the Deep Sands site when it is in a deteriorated condition resulting in additional damage to the soil and plant resources.

Retrogression of the Salt Meadow, Overflow, and Plains Swale ecological sites results in alkali sacaton,



**Figure 7.—A typical landscape in the Loamy Plains range site. Pictured is an area of Weld soil.**

western wheatgrass, switchgrass, prairie cordgrass, big bluestem, and fourwing saltbush decreasing from the plant community. Inland saltgrass, Baltic rush, foxtail barley, blue grama, and several forbs increase in relative abundance. Continued degradation of the Salt Meadow site results in a low diversity, almost monoculture, stand of inland saltgrass. Continued ecological deterioration of the Plains Swale site creates a sodbound condition of buffalograss and blue grama.

Retrogression of the Gravel Breaks and Sandstone Breaks ecological sites results in a decrease in the relative abundance of sideoats grama, little bluestem, needleandthread, Indian ricegrass, western wheatgrass, big bluestem, and switchgrass. Blue grama, hairy grama, galleta, and numerous forbs increase in relative abundance. As retrogression proceeds, broom snakeweed, small soapweed, fringed sagebrush, Bigelow sagebrush, redthreeawn, and sand dropseed dominate these sites.

## Windbreaks and Environmental Plantings

Greg Sundstrom, Forester, Colorado State Forest Service and Natural Resources Conservation Service, helped prepare this section.

Windbreaks protect livestock, buildings, and yards from wind and snow. They also protect fruit trees and gardens and they furnish habitat for wildlife. Several rows of low- and high-growing broadleaf and coniferous trees and shrubs provide the most protection. A minimum of two rows is necessary for adequate protection in Lincoln County. In areas where

space is limited, a twin-row high density design consisting of two closely spaced rows with dense in-row tree spacing can be used, but 5 to 7 rows with 20 to 24 feet between rows give best results. Within rows in multiple row windbreaks, spacing of 14 to 18 feet for deciduous trees, 12 to 16 feet for evergreen trees, and 4 to 6 feet for shrubs provide best protection and room enough for individual trees to reach their growth potential.

When Lincoln County was first settled, tree plantings were made under the Timber Culture Act of 1873. Settlers planted ten acres of trees to acquire public land for a homestead. These timber claims go back to at least 1886. Few remnants of these early plantings remain.

Early settlers used trees for fuel, lumber, and fenceposts. Today, however, trees and shrubs are grown on most of the farmsteads and ranch headquarters in the county primarily to provide protection, control drifting snow, and improve aesthetics. Trees need to be continually planted because trees and shrubs pass maturity and deteriorate. Insects, disease, or storms can destroy individual trees, or segments of tree rows in windbreaks.

Planting trees and shrubs away from their natural range places them in a stressful environment, causing them to be more susceptible to insect, disease, and environmental damage. To offset these factors and have a successful planting, the landowner should invest in the highest quality seedlings available, use species that can adapt to the soils in the area, and prepare a quality planting site.

Limited available soil moisture is the main factor restricting windbreak plantings in Lincoln County. Providing supplemental water and controlling competing plant growth (grass, weeds) are recognized methods of overcoming this limitation. A drip irrigation system and the use of plastics (fabricated mulches) for water collection, evaporation barriers, and weed



**Figure 8.—A typical landscape in the Shaly Plains range site in northwestern Lincoln County. Pictured is an area of Shingle and Midway soils.**



**Figure 9.—An area of Arvada soil. This area is in the Salt Flat range site.**

control are new windbreak technologies that have increased first year survival from 50 to more than 90 percent in areas that have limited soil moisture.

Field windbreaks protect cropland and crops from wind, help to keep snow on fields, and provide food and cover for wildlife. Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced for these purposes.

Table 9 shows the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates in table 9 are based on measurements and observation of established plantings that have been given adequate care. They can be used as a guide in planning windbreaks and screens. Additional information on planning, planting, and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service, Colorado State Forest Service, the Cooperative Extension Service, or from a commercial nursery.

## Recreation

Lincoln County offers a wide variety of recreational activities, such as hunting, fishing, hiking, camping, picnicking, and other outdoor recreational activities. Sightseeing and photography opportunities exist at the natural, scenic, and historical sites in the county and nearby areas.

Hunting in Lincoln County occurs during regular seasons, which include ring-necked pheasant, sharp-tailed grouse, rabbit, squirrel, raccoon, and coyote. Mourning dove are also common throughout the county and provide early opportunities for hunting in the fall. White-tailed deer, mule deer, and antelope are plentiful for big game hunters.

Hugo, the county seat, offers a nine-hole golf course, playgrounds, a museum, and a swimming pool.

The soils of the survey area are rated in tables 10a and 10b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the

specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in tables 10a and 10b can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

*Camp areas* require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas.

The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

*Picnic areas* are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

*Playgrounds* require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

*Paths and trails* for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

*Off-road motorcycle trails* require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These

properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

*Golf fairways* are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

## Wildlife Habitat

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 11, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

*Grain and seed crops* are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

*Grasses and legumes* are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, lovegrass, bromegrass, clover, and alfalfa.

*Wild herbaceous plants* are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

*Hardwood trees* and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, cottonwood, chokecherry, wild plum, gooseberry, black walnut, and mulberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are Russian-olive, autumn-olive, and skunkbush sumac.

*Coniferous plants* furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, cedar, and juniper.

*Shrubs* are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs are depth of the root zone, available water capacity, salinity, and soil moisture. Examples of shrubs are bitterbrush, winterfat, sand sagebrush, fourwing saltbush, skunkbush sumac, and rubber rabbitbrush.

*Wetland plants* are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, wildrice, saltgrass, cordgrass, rushes, sedges, and reeds.

*Shallow water areas* have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

*Habitat for openland wildlife* consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, and red fox.

*Habitat for woodland wildlife* consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, thrushes, woodpeckers, fox, raccoon, and deer.

*Habitat for wetland wildlife* consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

*Habitat for rangeland wildlife* consists of areas of shrubs and wild herbaceous plants. Wildlife attracted to rangeland include pronghorn, deer, meadowlark, and lark bunting.

## Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, agricultural waste management, construction materials, and water management. The ratings are based on observed performance of the soils and on the estimated data and test data in the "Soil Properties" section.

*Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.*

*The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.*

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

**Building Site Development**

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 12a and 12b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Dwellings* are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

*Small commercial buildings* are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

*Local roads and streets* have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

*Shallow excavations* are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

*Lawns and landscaping* require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

**Sanitary Facilities**

Tables 13a and 13b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Septic tank absorption fields* are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

*Sewage lagoons* are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation,

trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

*Daily cover for landfill* is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

### Agricultural Waste Management

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

Tables 14a and 14b show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher

concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Application of manure and food-processing waste* not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

*Application of sewage sludge* not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the

application of sludge. Permanently frozen soils are unsuitable for waste treatment.

*Disposal of wastewater by irrigation* not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds, but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding. The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

*Overland flow of wastewater* is a process in which wastewater is applied to the upper reaches of sloped land and allowed to flow across vegetated surfaces, sometimes called terraces, to runoff-collection ditches. The length of the run generally is 150 to 300 feet. The application rate ranges from 2.5 to 16.0 inches per week. It commonly exceeds the rate needed for irrigation of cropland. The wastewater leaves solids and nutrients on the vegetated surfaces as it flows downslope in a thin film. Most of the water reaches the collection ditch, some is lost through evapotranspiration, and a small amount may percolate to the ground water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, and the design and construction of the system. Reaction and the cation-exchange capacity affect absorption. Reaction, salinity, and the sodium adsorption ratio affect plant growth and microbial activity. Slope, permeability, depth to a water table, ponding, flooding, depth to bedrock or a cemented pan, stones, and cobbles affect design and construction. Permanently frozen soils are unsuitable for waste treatment.

*Rapid infiltration of wastewater* is a process in which wastewater applied in a level basin at a rate of 4 to 120 inches per week percolates through the soil. The wastewater may eventually reach the ground water. The application rate commonly exceeds the rate needed for irrigation of cropland. Vegetation is not a necessary part of the treatment; hence, the basins may or may not be vegetated. The thickness of the soil material needed for proper treatment of the wastewater is more than 72 inches. As a result, geologic and hydrologic investigation is needed to ensure proper design and performance and to determine the risk of ground-water pollution.

The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. Depth to a water table, ponding, flooding, and depth to bedrock or a cemented pan affect the risk of pollution and the design and construction of the system. Slope, stones, and cobbles also affect design and construction. Permeability and reaction affect performance. Permanently frozen soils are unsuitable for waste treatment.

*Slow rate treatment of wastewater* is a process in which wastewater is applied to land at a rate normally between 0.5 inch and 4.0 inches per week. The application rate commonly exceeds the rate needed for irrigation of cropland. The applied wastewater is treated as it moves through the soil. Much of the treated water may percolate to the ground water, and some enters the atmosphere through evapotranspiration. The applied water generally is not allowed to run off the surface. Waterlogging is prevented either through control of the application rate or through the use of tile drains, or both.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, and the application of waste. The properties that affect absorption include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, depth to bedrock or a cemented pan, reaction, the cation-exchange capacity, and slope. Reaction, the sodium adsorption ratio, salinity, and bulk density affect plant growth and microbial activity. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

### Construction Materials

Tables 15a and 15b give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

*Sand* and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They

are used in many kinds of construction. Specifications for each use vary widely. In table 15a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated as a *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the soil is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

The soils are rated *good, fair,* or *poor* as potential sources of reclamation material, roadfill, and topsoil. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of reclamation material, roadfill, or topsoil. The lower the number, the greater the limitation.

*Reclamation material* is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

*Roadfill* is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

*Topsoil* is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

**Water Management**

Table 16 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and are easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to

overcome that special design, significant increase in construction costs, and possibly increased maintenance are required.

This table also gives for each soil the restrictive features that affect drainage, irrigation, terraces and diversions, and grassed waterways.

*Pond reservoir areas* hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

*Embankments, dikes, and levees* are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

*Aquifer-fed excavated ponds* are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

*Drainage* is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, a cemented pan, or other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditchbanks are affected by depth to bedrock or a cemented pan, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

*Irrigation* is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

*Terraces and diversions* are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

*Grassed waterways* are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, slope, and depth to bedrock or a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

# Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

## Engineering Index Properties

Table 17 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

*Depth* to the upper and lower boundaries of each layer is indicated.

*Texture* is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. Loam, for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, gravelly. Textural terms are defined in the Glossary.

*Classification* of the soils is determined according to the Unified soil classification system (ASTM, 1998) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 1998).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

*Rock fragments* larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

*Percentage (of soil particles) passing designated sieves* is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

*Liquid limit* and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The

estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

## Physical Properties

Table 18 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

*Depth* to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

*Clay* as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 18, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

*Moist bulk density* is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

*Permeability ($K_{sat}$)* refers to the ability of a soil to transmit water or air. The term permeability, as used in soil surveys, indicates saturated hydraulic conductivity ($K_{sat}$). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

*Available water capacity* refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

*Linear extensibility* refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

*Organic matter* is the plant and animal residue in the soil at various stages of decomposition. In table 18, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil.

Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

*Erosion factor K* indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of several factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

*Erosion factor Kf* indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

*Erosion factor T* is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

*Wind erodibility groups* are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

*Wind erodibility index* is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

## Chemical Properties

Table 19 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

*Depth* to the upper and lower boundaries of each layer is indicated.

*Cation-exchange capacity* is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

*Soil reaction* is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

*Calcium carbonate* equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

*Gypsum* is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

*Salinity* is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the

frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

*Sodium adsorption ratio* (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.

## Soil Features

Table 20 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. *Depth* refers to the vertical distance from the soil surface to the upper boundary of the restrictive layer.

*Potential for frost action* is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

*Risk of corrosion* pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

## Water Features

Table 21 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

*Hydrologic soil groups* are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface,

and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

*Water table* refers to a saturated zone in the soil. Table 21 indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

*Ponding* is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 21 indicates *surface water depth* and the *frequency* of ponding. Frequency is expressed as none, rare, and occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

*Flooding* is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

*Duration* and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

# Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1998 and 1999). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 22 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Mollisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Ustoll (*Ust*, meaning burnt, plus *oll*, from Mollisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Argiustolls (*Argi*, meaning white clay, plus *ustoll*, the suborder of Mollisols that have an ustic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. An example is Aridic Augiustolls.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, superactive, mesic Aridic Argiustolls.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

## Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (Soil Survey Division Staff, 1993). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (Soil Survey Staff, 1999) and in "Keys to Soil Taxonomy" (Soil Survey Staff, 1998). Unless otherwise indicated, matrix colors in the descriptions are for dry soil. Following the pedon description is the range of important characteristics of the soils in the series.

### *Apishapa Series*

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Parent material:* Alluvium
*Landform:* Depressions
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 3 percent

*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Apishapa clay loam, 0 to 3 percent slopes, rarely ponded, about 2,138 feet west and 2,178 feet south of the northeast corner of sec. 35, T. 16 S., R. 53 W.

Ap—0 to 8 inches; light brownish gray (10YR 6/2) clay loam, dark grayish brown (10YR 4/2) moist; weak very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; slightly alkaline; clear smooth boundary.
AC—8 to 15 inches; light brownish gray (10YR 6/2) silty clay loam, dark gray (10YR 4/1) moist; moderate fine platy structure; hard, firm, moderately sticky and moderately plastic; common fine distinct brownish yellow (10YR 6/8) redoximophic concentrations; slightly alkaline; abrupt smooth boundary.
C1—15 to 21 inches; grayish brown (10YR 5/2) silty clay, very dark grayish brown (10YR 3/2) moist; weak coarse subangular blocky structure; extremely hard, very firm, very sticky and very plastic; common fine distinct brownish yellow (10YR 6/8) redoximorphic concentrations; slightly alkaline; clear wavy boundary.
C2—21 to 60 inches; pale brown (10YR 6/3) silty clay, dark grayish brown (10YR 4/2) moist; weak coarse prismatic structure; extremely hard, very firm, very sticky and very plastic; violently effervescent; slightly alkaline.

**Range in Characteristics**

*Depth to calcium carbonate:* 10 to greater than 18 inches
*Depth to redoximorphic features:* 0 to 60 inches

*A horizon:*
Hue—10YR or 2.5Y
Value—5 to 7, 3 to 5 moist
Chroma—1 to 3
Texture—silty clay loam, loam, clay loam, silty clay, or clay
Reaction—moderately acid to moderately alkaline

*AC horizon:*
Hue—10YR or 2.5Y
Value—5 or 6, 4 or 5 moist
Chroma—1 or 2
Texture—clay, silty clay, silty clay loam, or clay loam
Reaction—neutral to strongly alkaline

*C horizon:*
Hue—10YR to 5Y
Value—5 or 6, 4 to 6 moist
Chroma—1 to 3
Texture—silty clay loam, silty clay, clay loam, or clay
Reaction—neutral to strongly alkaline

## *Arvada Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium
*Landform:* Drainageways and fans
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 5 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Arvada clay loam, 0 to 5 percent slopes, about 185 feet north and 265 feet east of the southwest corner of sec. 4, T. 17 S., R 53 W.

A—0 to 4 inches; light brownish gray (2.5Y 6/2) clay loam, dark grayish brown (2.5Y 4/2) moist; moderate fine granular structure; hard, friable, moderately sticky and very plastic; many very fine and few medium roots; common very fine pores; slightly effervescent; moderately alkaline; clear smooth boundary.
Btn1—4 to 14 inches; grayish brown (2.5Y 5/2) clay, dark grayish brown (2.5Y 4/2) moist; weak coarse prismatic structure parting to moderate medium and coarse subangular blocky; very hard, firm, very sticky and very plastic; common very fine and fine and few medium roots; common very fine pores; few faint clay films on faces of peds; strongly effervescent; few fine masses of salts; moderately alkaline; clear smooth boundary.
Btn2—14 to 25 inches; light brownish gray (2.5Y 6/2) clay, dark grayish brown (2.5Y 4/2) moist; moderate coarse subangular blocky structure; extremely hard, very firm, moderately sticky and very plastic; few very fine and fine roots; few very fine pores; few faint clay films on faces of peds; strongly effervescent; few fine masses of salts; moderately alkaline; clear smooth boundary.
Bkn1—25 to 35 inches; light brownish gray (2.5Y 6/2) silty clay, grayish brown (2.5Y 5/2) moist; weak medium and coarse subangular blocky structure;

extremely hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine pores; common fine masses of calcium carbonate; strongly effervescent; few fine masses of salts; moderately alkaline; clear smooth boundary.

Bkn2—35 to 44 inches; light brownish gray (2.5Y 6/2) clay, grayish brown (2.5Y 5/2) moist; weak coarse subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; few very fine pores; few fine masses of calcium carbonate; strongly effervescent; few fine masses of salts; moderately alkaline; clear smooth boundary.

Bkny1—44 to 55 inches; grayish brown (2.5Y 5/2) clay loam, dark grayish brown (2.5Y 4/2) moist; massive; hard, friable, moderately sticky and moderately plastic; common very fine pores; many fine masses of calcium carbonate; slightly effervescent; few fine masses of salts; common fine masses of gypsum; 10 percent fine gravel; moderately alkaline; clear smooth boundary.

Bkny2—55 to 60 inches; grayish brown (2.5Y 5/2) silty clay, dark grayish brown (2.5Y 4/2) moist; massive; extremely hard, firm, moderately sticky and moderately plastic; few very fine pores; many fine masses of calcium carbonate; strongly effervescent; few fine masses of salts; common fine masses of gypsum; 5 percent fine gravel; moderately alkaline.

**Range in Characteristics**

• Some pedons have a C horizon.

*A horizon:*
Hue—10YR to 5Y
Value—5 to 7
Chroma—2 to 4
Texture—fine sandy loam, loam, silty clay loam, or clay loam
Sodium adsorption ratio—0 to 5
Reaction—neutral to strongly alkaline

*Btn horizon:*
Hue—7.5YR to 5Y
Value—4 to 6
Chroma—2 to 4
Texture—silty clay loam, silty clay, clay loam, or clay
Sodium adsorption ratio—15 to 30
Reaction—moderately alkaline to very strongly alkaline

*Bkn and Bkny horizons:*
Hue—7.5YR to 2.5Y
Value—5 or 6
Chroma—2 to 4
Texture—silty clay loam, silty clay, clay loam, or clay
Sodium adsorption ratio—10 to 30
Reaction—moderately alkaline to very strongly alkaline

## *Ascalon Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Eolian deposits
*Landform:* Hills and plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 9 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 13 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Ascalon sandy loam, 3 to 5 percent slopes, about 185 feet east and 330 feet south of the northwest corner of sec. 20, T. 12 S., R. 56 W.

Ap—0 to 4 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, friable, slightly sticky and slightly plastic; few fine roots; neutral; clear smooth boundary.

Bt1—4 to 7 inches; brown (10YR 4/3) sandy clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; few fine roots; neutral; clear smooth boundary.

Bt2—7 to 15 inches; yellowish brown (10YR 5/4) sandy clay loam, dark yellowish brown (10YR 4/4) moist; weak medium prismatic structure parting to moderate medium subangular blocky; hard, friable, moderately sticky and moderately plastic; few fine roots; slightly alkaline; clear smooth boundary.

Bk1—15 to 29 inches; pale brown (10YR 6/3) fine sandy loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; very few fine roots; common medium masses of calcium carbonate; strongly effervescent; moderately alkaline; clear smooth boundary.

Bk2—29 to 41 inches; very pale brown (10YR 7/3) very fine sandy loam, pale brown (10YR 6/3) moist; weak course prismatic structure parting to weak medium subangular blocky; slightly hard, very friable, moderately sticky and slightly plastic; very few fine roots; many very fine pores; common

medium masses of calcium carbonate; strongly effervescent; moderately alkaline; clear smooth boundary.

Bk3—41 to 60 inches; very pale brown (10 7/3) very fine sandy loam, pale brown (10YR 6/3) moist; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, very friable, moderately sticky and moderately plastic; very few fine roots; many very fine pores; few fine masses of calcium carbonate; strongly effervescent; moderately alkaline.

**Range in Characteristics**

*Depth to calcium carbonate:* 8 to 30 inches

*Ap horizon:*
- Hue—10YR or 2.5Y
- Value—4 or 5, 2 or 3 moist
- Chroma—2 or 3
- Texture—sandy loam or fine sandy loam
- Reaction—neutral or slightly alkaline

*Bt horizon:*
- Hue—7.5YR to 2.5Y
- Value—4 to 6, 3 or 4 moist
- Chroma—2 to 4
- Texture—sandy loam, loam, sandy clay loam, or clay loam
- Reaction—neutral to moderately alkaline

*Bk horizon:*
- Hue—10YR or 2.5Y
- Value—6 or 7
- Chroma—2 to 4
- Texture—fine sandy loam, very fine sandy loam, loam, or sandy clay loam
- Reaction—moderately alkaline or strongly alkaline

## *Bacid Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Loess
*Landform:* Plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 2 percent
*MLRA:* 69
*Mean annual precipitation:* 11 to 14 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Bacid silt loam, 0 to 2 percent slopes, about 1,954 feet east and 105 feet north of the southwest corner of sec. 34, T. 17 S., R. 52 W.

Ap—0 to 4 inches; brown (10YR 5/3) silt loam, dark grayish brown (10YR 4/2) moist; moderate fine granular structure; soft, friable, slightly sticky and slightly plastic; many fine roots; slightly effervescent; slightly alkaline; abrupt smooth boundary.

Bt1—4 to 6 inches; brown (10YR 5/3) silty clay loam, brown (10YR 4/3) moist; weak coarse prismatic structure parting to moderate medium subangular blocky; hard, firm, moderately sticky and moderately plastic; many fine roots; few faint clay films on faces of peds; slightly alkaline; clear smooth boundary.

Bt2—6 to 11 inches; brown (10YR 5/3) silty clay loam, brown (10YR 4/3) moist; moderate fine and medium prismatic structure parting to moderate fine and medium angular blocky; very hard, very firm, very sticky and very plastic; many fine roots; common distinct clay films on faces of peds; slightly alkaline; clear smooth boundary.

Btk1—11 to 15 inches; pale brown (10YR 6/3) silty clay, brown (10YR 5/3) moist; moderate medium prismatic structure parting to moderate medium angular blocky; very hard, very firm, very sticky and very plastic; many fine roots; few distinct clay films on faces of peds; few fine and medium masses of calcium carbonate; strongly effervescent; moderately alkaline; clear smooth boundary.

Btk2—15 to 21 inches; pale brown (10YR 6/3) silty clay, dark grayish brown (10YR 4/2) moist; weak medium prismatic structure parting to moderate medium subangular blocky; very hard, very firm, very sticky and very plastic; many fine roots; common very fine pores; few fine masses of calcium carbonate; violently effervescent; moderately alkaline; clear wavy boundary.

Bk1—21 to 33 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 5/3) moist; weak medium and coarse prismatic structure parting to weak medium and coarse subangular blocky; hard, firm, very sticky and moderately plastic; few fine roots; few very fine pores; few fine masses of calcium carbonate; violently effervescent; moderately alkaline; gradual wavy boundary.

Bk2—33 to 60 inches; very pale brown (10YR 7/3) silty clay loam, pale brown (10YR 6/3) moist; weak coarse prismatic structure parting to weak medium and coarse subangular blocky; soft, friable, moderately sticky and moderately plastic; few very fine roots; common very fine pores; many

fine masses of calcium carbonate; violently effervescent; moderately alkaline.

**Range in Characteristics**

• Some pedons have a C horizon.

*A horizon:*
Hue—10YR
Value—4 to 6, 3 or 4 moist
Chroma—2 or 3
Texture—silt loam
Reaction—neutral to moderately alkaline

*Bt horizon:*
Hue—7.5YR to 2.5Y
Value—5 to 7, 4 or 5 moist
Chroma—2 to 4
Texture—silty clay loam, silty clay, or clay
Reaction—neutral to moderately alkaline

*Btk horizon:*
Hue—7.5YR to 2.5Y
Value—5 to 7, 4 or 5 moist
Chroma—2 to 4
Texture—silty clay loam, silty clay, or clay
Calcium carbonate equivalent—5 to 15 percent
Reaction—moderately alkaline or strongly alkaline

*Bk horizon:*
Hue—10YR or 2.5Y
Value—5 to 7, 4 to 6 moist
Chroma—2 to 4
Texture—silt loam or silty clay loam
Calcium carbonate equivalent—5 to 15 percent
Reaction—moderately alkaline or strongly alkaline

## *Bankard Series*

*Depth class:* Very deep
*Drainage class:* Somewhat excessively drained
*Parent material:* Alluvium
*Landform:* Flood plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 3 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Bankard-Glenberg complex, 0 to 3 percent slopes, occasionally flooded, in the northwest quarter of the southeast quarter of sec. 35, T. 10 S., R. 55 W.

A—0 to 5 inches; grayish brown (10YR 5/2) loamy sand, dark grayish brown (10YR 4/2) moist; weak fine granular structure; slightly hard, very friable, nonsticky and nonplastic; few fine roots; slightly alkaline; clear smooth boundary.
Bw—5 to 13 inches; pale brown (10YR 6/3) loamy sand, brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; few fine roots; slightly alkaline.
Bk—13 to 60 inches; light brownish gray (10YR 6/2) loamy sand, dark grayish brown (10YR 4/2) moist; single grain; hard, very friable, nonsticky and nonplastic; very few fine masses of calcium carbonate; slightly effervescent; slightly alkaline.

**Range in Characteristics**

*A horizon:*
Hue—10YR
Value—5, 3 or 4 moist
Chroma—2 or 3
Texture—loamy sand or sandy loam
Reaction—neutral to moderately alkaline

*Bw and Bk horizons:*
Hue—10YR
Value—5 or 6, 4 moist
Chroma—2 to 4
Texture—sand or loamy sand
Calcium carbonate equivalent—0 to 5 percent
Reaction—neutral to moderately alkaline

## *Bijou Series*

*Depth class:* Very deep
*Drainage class:* Somewhat excessively drained
*Parent material:* Eolian deposits
*Landform:* Hills, interdunes, or plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 12 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Bijou loamy sand, moist, 1 to 3 percent slopes, about 2,110 feet south and 2,510 feet west of the northeast corner of sec. 3, T. 12 S., R. 54 W.

A—0 to 4 inches; brown (10YR 5/3) loamy sand, brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; neutral; clear smooth boundary.

AB—4 to 9 inches; brown (10YR 5/3) loamy sand, brown (10YR 4/3) moist; weak medium subangular blocky structure; loose, nonsticky and nonplastic; neutral; gradual wavy boundary.
Bt1—9 to 17 inches; brown (10YR 5/3) sandy loam, brown (10YR 4/3) moist; weak coarse prismatic structure parting to moderate medium subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; slightly alkaline; gradual wavy boundary.
Bt2—17 to 36 inches; brown (10YR 5/3) sandy loam, brown (10YR 4/3) moist; moderate coarse prismatic structure parting to weak coarse subangular blocky; hard, friable, moderately sticky and moderately plastic; slightly alkaline; clear wavy boundary.
BC—36 to 50 inches; olive brown (2.5Y 6/6) loamy sand, light olive yellow (2.5Y 5/6) moist; weak coarse prismatic structure; slightly hard, loose, nonsticky and nonplastic; slightly alkaline; gradual wavy boundary.
C—50 to 60 inches; yellow (2.5Y 7/6) loamy sand, olive yellow (2.5Y 6/6) moist; single grain; nonsticky and nonplastic; slightly alkaline.

**Range in Characteristics**

*Depth to calcium carbonate:* 40 to greater than 60 inches

*A horizon:*
Hue—10YR
Value—5 or 6, 3 or 4 moist
Chroma—2 or 3
Texture—loamy sand or sandy loam
Reaction—neutral or slightly alkaline

*Bt horizon:*
Hue—10YR
Value—4 to 6
Chroma—2 or 3
Texture—coarse sandy loam or sandy loam
Reaction—neutral or slightly alkaline

*C horizon:*
Hue—10YR or 2.5Y
Value—6 or 7, 5 or 6 moist
Chroma—3 to 6
Texture—sand, loamy coarse sand, or loamy sand
Reaction—neutral to moderately alkaline

## *Blakeland Series*

*Depth class:* Very deep
*Drainage class:* Somewhat excessively drained
*Parent material:* Eolian deposits
*Landform:* Dunes
*Elevation:* 4,400 to 6,000 feet
*Slope:* 3 to 12 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 percent
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Blakeland loamy sand, 3 to 12 percent slopes, about 680 feet east and 2,440 feet south of the northwest corner of sec. 32, T. 9 S., R. 56 W.

A—0 to 4 inches; grayish brown (10YR 5/2) loamy sand, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; nonsticky and nonplastic; many fine roots; few very fine pores; neutral; diffuse smooth boundary.
AC—4 to 12 inches; grayish brown (10YR 5/2) loamy sand, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many fine roots; few very fine pores; neutral; clear smooth boundary.
C1—12 to 30 inches; pale brown (10YR 6/3) loamy sand, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; common fine roots; few very fine pores; neutral; clear smooth boundary.
C2—30 to 60 inches; very pale brown (10YR 7/3) loamy sand, pale brown (10YR 6/3) moist; massive; nonsticky and nonplastic; few fine roots; slightly alkaline.

**Range in Characteristics**

*A horizon:*
Hue—10YR
Value—4 or 5, 2 or 3 moist
Chroma—2 or 3
Texture—loamy sand
Reaction—neutral or slightly alkaline

*AC horizon:*
Hue—10YR
Value—4 or 5, 2 or 3 moist
Chroma—2 or 3
Texture—loamy sand
Reaction—neutral or slightly alkaline

*C horizon:*
Hue—10YR
Value—6 or 7, 4 to 6 moist
Chroma—2 to 5
Texture—loamy sand
Reaction—neutral or slightly alkaline

## *Bresser Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium and/or eolian deposits
*Landform:* Hills
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 5 percent
*MLRA:* 69
*Mean annual precipitation:* 11 to 14 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Bresser sandy loam, 1 to 5 percent slopes, about 1,100 feet south and 1,820 feet west of the northeast corner of section 25, T. 16 S., R. 59 W.

A—0 to 3 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; slightly hard, very friable, nonsticky and nonplastic; common fine roots; few very fine pores; neutral; clear smooth boundary.

Bt1—3 to 8 inches; brown (10YR 4/3) sandy clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and nonplastic; common fine roots; few very fine pores; neutral; clear smooth boundary.

Bt2—8 to 13 inches; brown (10YR 5/3) sandy clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure parting to moderate fine subangular blocky; very hard, friable, moderately sticky and moderately plastic; common fine roots; few very fine pores; neutral; clear smooth boundary.

BC—13 to 19 inches; pale brown (10YR 6/3) coarse sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; extremely hard, firm, slightly sticky and nonplastic; common fine roots; few very fine pores; slightly alkaline; clear smooth boundary.

C1—19 to 28 inches; light yellowish brown (10YR 6/4) loamy coarse sand, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common fine roots; few very fine pores; neutral; clear smooth boundary.

C2—28 to 47 inches; pale brown (10YR 6/3) loamy coarse sand, brown (10YR 5/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few fine roots; few very fine pores; neutral; clear smooth boundary.

C3—47 to 60 inches; pale brown (10YR 6/3) loamy coarse sand, brown (10YR 5/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few fine roots; few very fine pores; slightly effervescent; slightly alkaline.

**Range in Characteristics**

*Depth to calcium carbonate:* 40 to greater than 60 inches

*A horizon:*
Hue—10YR
Value—4 or 5 , 2 or 3 moist
Chroma—2 or 3
Texture—sandy loam
Reaction—neutral

*Bt horizon:*
Hue—10YR
Value—4 to 6, 3 to 5 moist
Chroma—2 or 3
Texture—sandy clay loam
Reaction—neutral or slightly alkaline

*C horizon:*
Hue—10YR
Value—6 or 7, 5 or 6 moist
Chroma—3 to 5
Texture—loamy coarse sand
Reaction—neutral to moderately alkaline

## *Campo Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Loess
*Landform:* Plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 2 percent
*MLRA:* 69
*Mean annual precipitation:* 11 to 14 inches
*Mean annual temperature:* 47 to 53 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Campo silt loam, 0 to 2 percent slopes, about 100 feet south and 335 feet west of the northeast corner of sec. 30, T. 16 S., R. 52 W.

Ap—0 to 3 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; moderate fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; slightly alkaline; abrupt smooth boundary.

Bt—3 to 10 inches; brown (10YR 5/3) clay, brown (10YR 4/3) moist; moderate medium prismatic

structure parting to moderate very fine subangular blocky; hard, firm, very sticky and moderately plastic; many faint clay films on faces of peds; slightly alkaline; abrupt smooth boundary.

Btk—10 to 15 inches; pale brown (10YR 6/3) silty clay, dark brown (10YR 3/3) moist; moderate medium prismatic structure parting to moderate fine angular blocky; hard, firm, moderately sticky and moderately plastic; common distinct clay films on faces of peds; common medium masses of calcium carbonate; strongly effervescent; moderately alkaline; clear wavy boundary.

Bk1—15 to 25 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 5/3) moist; weak medium prismatic structure parting to weak medium subangular blocky; slightly hard, friable, moderately sticky and moderately plastic; common medium masses of calcium carbonate; violently effervescent; moderately alkaline; gradual wavy boundary.

Bk2—25 to 60 inches; light yellowish brown (10YR 6/4) silt loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few fine masses of calcium carbonate; violently effervescent; moderately alkaline.

**Range in Characteristics**

*Ap horizon:*
- Hue—10YR
- Value—5 or 6, 3 or 4 moist
- Chroma—2 or 3
- Texture—silt loam
- Reaction—neutral or slightly alkaline

*Bt horizon:*
- Hue—10YR
- Value—5 or 6, 4 or 5 moist
- Chroma—3 or 4
- Texture—silty clay loam, silty clay, clay loam, or clay
- Reaction—slightly alkaline

*Btk and Bk horizons:*
- Hue—10YR
- Value—5 or 6, 3 to 5 moist
- Chroma—3 or 4
- Texture—silty clay loam or silty clay
- Reaction—moderately alkaline

*Lower Bk horizon:*
- Hue—10YR
- Value—5 or 6
- Chroma—3 or 4
- Texture—loam or silt loam
- Reaction—moderately alkaline

## *Canyon Series*

*Depth class:* Shallow
*Drainage class:* Well drained
*Parent material:* Residuum from sandstone
*Landform:* Hills
*Elevation:* 4,400 to 6,000
*Slope:* 3 to 60 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Canyon gravelly loam in an area of Canyon-Rock outcrop complex, 5 to 60 percent slopes, about 150 feet south and 1,900 feet east of the northwest corner of sec. 3, T. 6 S., R. 45 W.; USGS Idalia, Colorado, SW topographic quadrangle; lat. 39 degrees 33 minutes 53 seconds N. and long. 102 degrees 25 minutes 18 seconds W.

A—0 to 3 inches; brown (10YR 5/3) gravelly loam, brown (10YR 4/3) moist; weak fine granular structure; slightly hard, very friable, nonsticky and nonplastic; strongly effervescent; 15 percent gravel; moderately alkaline; clear smooth boundary.

AC—3 to 7 inches; brown (10YR 5/3) loam, brown (10YR 4/3) moist; weak coarse subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; strongly effervescent; moderately alkaline; clear smooth boundary.

C—7 to 10 inches; very pale brown (10YR 8/2) loam, grayish brown (10YR 5/2) moist; massive; hard, very friable, nonsticky and nonplastic; violently effervescent; 5 percent fine gravel; moderately alkaline; abrupt wavy boundary.

Cr—10 to 14 inches; weakly cemented calcareous sandstone.

**Range in Characteristics**

*Depth to paralithic contact:* 10 to 18 inches
*Depth to calcareous material:* 0 to 6 inches
*Rock fragment content:* 0 to 20 percent

*A horizon:*
- Hue—10YR
- Value—4 to 6 dry, 3 to 5 moist
- Chroma—2 or 3
- Texture—gravelly loam
- Calcium carbonate equivalent—0 to 10 percent
- Reaction—slightly or moderately alkaline

*AC horizon:*
Hue—10YR
Value—5 or 6 dry, 4 or 5 moist
Chroma—2 or 3
Texture—loam or gravelly loam
Calcium carbonate equivalent—1 to 10 percent
Reaction—moderately alkaline

*C horizon:*
Hue—10YR
Value—6 to 8 dry, 5 or 6 moist
Chroma—2 to 4
Texture—gravelly loam or loam
Calcium carbonate equivalent—1 to 10 percent
Reaction—moderately alkaline

## *Colby Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Loess
*Landform:* Hills and plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 12 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual temperature:* 47 to 53 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Colby silt loam, dry, 3 to 12 percent slopes, about 60 feet west and 264 feet south of the northeast corner of sec. 11, T. 9 S., R. 55 W.

Ap—0 to 5 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate fine granular structure; soft, friable, slightly sticky and slightly plastic; many very fine and fine roots; violently effervescent; moderately alkaline; abrupt smooth boundary.

Bk1—5 to 16 inches; light brownish gray (10YR 6/2) silt loam, brown (10YR 5/3) moist; weak medium and coarse prismatic structure parting to weak medium and coarse subangular blocky; slightly hard, firm, moderately sticky and slightly plastic; many very fine and fine roots; common fine masses of calcium carbonate; violently effervescent; moderately alkaline; clear smooth boundary.

Bk2—16 to 32 inches; light gray (10YR 7/2) silt loam, light brownish gray (10YR 6/2) moist; massive; soft, friable, moderately sticky and slightly plastic; few very fine roots; common fine masses of calcium carbonate; violently effervescent; moderately alkaline; gradual smooth boundary.

Bk3—32 to 60 inches; pale brown (10YR 6/3) silt loam, light brownish gray (10YR 6/2) moist; massive; soft, friable, slightly sticky and slightly plastic; few very fine roots; common fine masses of calcium carbonate; violently effervescent; moderately alkaline.

**Range in Characteristics**

*Ap horizon:*
Hue—10YR
Value—5 or 6, 3 to 5 moist
Chroma—2 or 3
Texture—silt loam
Reaction—slightly alkaline or moderately alkaline

*Bk horizon:*
Hue—10YR
Value—6 or 7, 4 or 5 moist
Chroma—2 or 3
Texture—silt loam or silty clay loam
Reaction—slightly alkaline or moderately alkaline

*Lower Bk horizon:*
Hue—10YR or 2.5Y
Value—6 to 8, 5 or 6 moist
Chroma—2 or 3
Texture—silt loam
Reaction—moderately alkaline or strongly alkaline

## *Firstview Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium
*Landform:* Drainageways and fans
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 3 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual temperature:* 47 to 53 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Firstview loamy sand, 0 to 3 percent slopes, about 1,250 feet east and 1,900 feet north of the southwest corner of sec. 1, T. 13 S., R. 54 W.

E—0 to 4 inches; grayish brown (10YR 5/2) loamy sand, dark grayish brown (10YR 4/2) moist; strong medium granular structure; loose, nonsticky and nonplastic; common very fine and fine roots; moderately alkaline; abrupt smooth boundary.

Btn—4 to 10 inches; light brownish gray (10YR 6/2) sandy clay loam, brown (10YR 5/3) moist; strong

very fine columnar structure parting to moderate very fine prismatic; hard, firm, moderately sticky and slightly plastic; common very fine and fine roots; few distinct clay films on faces of peds; few fine masses of salts; strongly alkaline; clear smooth boundary.

Btkn1—10 to 15 inches; pale brown (10YR 6/3) sandy clay loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; hard, firm, moderately sticky and slightly plastic; few very fine and fine roots; few very fine and fine pores; few faint clay films; few fine and medium masses of calcium carbonate; strongly effervescent; few fine masses of salts; very strongly alkaline; clear smooth boundary.

Btkn2—15 to 20 inches; grayish brown (10YR 5/2) sandy clay loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; few faint clay films on faces of peds; common fine and medium masses of calcium carbonate; strongly effervescent; few fine masses of salts; very strongly alkaline; clear smooth boundary.

Btkn3—20 to 28 inches; grayish brown (10YR 5/2) clay, brown (10YR 4/3) moist; weak fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; few very fine pores; few faint clay films on faces of peds; many fine and medium masses of calcium carbonate; strongly effervescent; few fine masses of salt; very strongly alkaline; clear smooth boundary.

Bk1—28 to 35 inches; grayish brown (10YR 5/2) sandy clay loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; hard, firm, moderately sticky and slightly plastic; few very fine and fine roots; few very fine pores; many fine and medium masses of calcium carbonate; strongly effervescent; strongly alkaline; clear smooth boundary.

Bk2—35 to 60 inches; light gray (10YR 7/2) loamy sand, brown (10YR 5/3) moist; massive; hard, friable, nonsticky and nonplastic; few very fine roots; few very fine pores; many fine and medium masses of calcium carbonate; strongly effervescent; strongly alkaline.

**Range in Characteristics**

*A or E horizon:*
- Hue—10YR
- Value—4 to 6, 3 to 5 moist
- Chroma—2 or 3
- Texture—loamy sand or sandy loam
- Reaction—neutral to moderately alkaline

*Btn horizon:*
- Hue—10YR or 2.5Y
- Value—4 to 6, 4 or 5 moist
- Chroma—2 to 4
- Texture—sandy clay loam, clay loam, or loam
- Sodium adsorption ratio—greater than 13
- Reaction—moderately alkaline to very strongly alkaline

*Btkn horizon:*
- Hue—10YR or 2.5Y
- Value—5 to 7, 4 to 6 moist
- Chroma—1 to 4
- Texture—sandy clay loam, clay loam, or clay
- Sodium adsorption ratio—greater than 13
- Reaction—moderately alkaline to very strongly alkaline

*Bk horizon:*
- Hue—10YR or 2.5Y
- Value—5 to 7, 4 to 6 moist
- Chroma—1 to 4
- Texture—loamy sand, sandy loam, sandy clay loam, or clay loam
- Sodium adsorption ratio—0 to 10
- Reaction—moderately alkaline to very strongly alkaline

## *Fort Collins Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium and/or eolian deposits
*Landform:* Hills and plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 25 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual temperature:* 47 to 53 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Fort Collins loam, 1 to 3 percent slopes, about 57 feet east and 1,280 feet south of the northwest corner of sec. 21, T. 12 S., R. 52 W.

A—0 to 3 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; neutral; clear smooth boundary.

BA—3 to 7 inches; brown (10YR 5/3) loam, dark grayish brown (10YR 4/2) moist; moderate fine subangular blocky structure; slightly hard, friable,

slightly sticky and moderately plastic; few very fine and fine roots; neutral; clear smooth boundary.
Bt—7 to 13 inches; brown (10YR 5/3) clay loam, brown (10YR 4/3) moist; strong fine and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine and fine roots; many faint clay films on faces of peds; neutral; clear smooth boundary.
Bk1—13 to 18 inches; very pale brown (10YR 7/3) loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and nonplastic; very few very fine roots; few very fine pores; common fine nodules of calcium carbonate; violently effervescent; moderately alkaline; clear smooth boundary.
Bk2—18 to 30 inches; very pale brown (10YR 7/3) loam, pale brown (10YR 6/3) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; very few very fine roots; few very fine pores; many fine nodules of calcium carbonate; violently effervescent; strongly alkaline; clear smooth boundary.
Bk3—30 to 60 inches; light yellowish brown (10YR 6/4) loam, brown (10YR 5/3) moist; massive; few very fine roots; very few very fine pores; common fine masses of calcium carbonate; violently effervescent; 2 percent fine gravel; moderately alkaline.

**Range in Characteristics**

• Rock fragments range from 0 to 5 percent throughout.

*A horizon:*
Hue—10YR or 2.5Y
Value—5 or 6, 3 to 5 moist
Chroma—2 or 3
Texture—loam
Reaction—neutral

*Bt horizon:*
Hue—10YR
Value—5 or 6, 4 or 5 moist
Chroma—2 or 3
Texture—clay loam
Reaction—neutral

*Bk horizon:*
Hue—10YR
Value—6 or 7, 5 or 6 moist
Chroma—3 or 4, 3 to 6 moist
Texture—loam or clay loam
Calcium carbonate equivalent—less than 15 percent
Reaction—moderately alkaline or strongly alkaline

*Lower Bk horizon:*
Hue—10YR or 2.5Y
Value—6 or 7, 5 or 6 moist
Chroma—3 or 4, 3 to 6 moist
Texture—loam or silt loam
Calcium carbonate equivalent—less than 15 percent
Reaction—moderately alkaline or strongly alkaline

## *Fort Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium and/or eolian deposits
*Landform:* Hills and plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 25 percent
*MLRA:* 69
*Mean annual precipitation:* 11 to 14 inches
*Mean annual temperature:* 47 to 53 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Fort loam, 1 to 3 percent slopes, about 1,400 feet north and 1,900 feet east of the southwest corner of sec. 24, T. 15 S., R. 54 W.

A—0 to 2 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate medium granular structure; slightly hard, very friable, moderately sticky and slightly plastic; many fine roots; slightly alkaline; abrupt smooth boundary.
AB—2 to 5 inches; brown (10YR 5/3) sandy loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, friable, moderately sticky and slightly plastic; many fine roots; neutral; clear smooth boundary.
Bt—5 to 9 inches; brown (10YR 5/3) clay loam, brown (10YR 4/3) moist; strong medium subangular blocky structure; hard, friable, moderately sticky and slightly plastic; few fine roots; common distinct clay films on faces of peds and in pores; slightly effervescent; slightly alkaline; gradual irregular boundary.
Btk1—9 to 19 inches; pale brown (10YR 6/3) clay loam, brown (10YR 5/3) moist; moderate medium prismatic structure parting to moderate fine subangular blocky; very hard, friable, moderately sticky and slightly plastic; few very fine pores; few faint clay films on faces of peds; few fine masses of calcium carbonate; violently effervescent; strongly alkaline; clear wavy boundary.
Btk2—19 to 34 inches; pale brown (10YR 6/3) clay

loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; very hard, friable, moderately sticky and slightly plastic; common very fine pores; few faint clay films in root channels and pores; many medium masses of calcium carbonate; violently effervescent; very strongly alkaline; gradual irregular boundary.

Bk1—34 to 43 inches; very pale brown (10YR 7/3) clay loam, pale brown (10YR 6/3) moist; massive; very hard, friable, moderately sticky and slightly plastic; common very fine pores; few fine masses of calcium carbonate; violently effervescent; moderately alkaline; clear smooth boundary.

Bk2—43 to 60 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 5/3) moist; massive; very hard, friable, moderately sticky and slightly plastic; few very fine pores; few fine masses of calcium carbonate; violently effervescent; moderately alkaline.

**Range in Characteristics**

*A horizon:*
- Hue—10YR
- Value—4 to 6, 3 or 4 moist
- Chroma—2 to 4
- Texture—loam
- Reaction—neutral or slightly alkaline

*Bt horizon:*
- Hue—10YR
- Value—5 or 6, 4 or 5 moist
- Chroma—2 to 4
- Texture—clay loam
- Reaction—neutral or slightly alkaline

*Btk horizon:*
- Hue—10YR
- Value—5 or 6
- Chroma—3 or 4
- Texture—loam or clay loam
- Calcium carbonate equivalent—5 to 15 percent
- Reaction—slightly alkaline to very strongly alkaline

*Bk horizon:*
- Hue—10YR
- Value—6 or 7, 5 or 6 moist
- Chroma—3 or 4
- Texture—loam, silt loam, silty clay loam, or clay loam
- Calcium carbonate equivalent—5 to 15 percent
- Reaction—moderately alkaline or strongly alkaline

## *Glenberg Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium
*Landform:* Flood plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 3 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Bankard-Glenberg complex, 0 to 3 percent slopes, occasionally flooded, about 2,200 feet south and 2,550 feet west of the northeast corner of sec. 35, T. 10 S., R. 55 W.

Ap—0 to 3 inches; grayish brown (10YR 5/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine granular structure; slightly hard, very friable, nonsticky and nonplastic; neutral; clear smooth boundary.

AB—3 to 8 inches; light brownish gray (10YR 6/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; slightly alkaline; clear smooth boundary.

Bk1—8 to 24 inches; light brownish gray (10YR 6/2) sandy loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few fine masses of calcium carbonate; slightly effervescent; moderately alkaline; clear smooth boundary.

Bk2—24 to 32 inches; grayish brown (10YR 5/2) sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few fine masses of calcium carbonate; slightly alkaline; clear smooth boundary.

Bk3—32 to 60 inches; light brownish gray (10YR 6/2) loamy sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; many fine masses of calcium carbonate; moderately alkaline.

**Range in Characteristics**

*A horizon:*
- Hue—10YR
- Value—4 or 5, 3 or 4 moist
- Chroma—2 or 3
- Texture—fine sandy loam, sandy loam, or loamy sand
- Reaction—neutral to moderately alkaline

*AB horizon:*
- Hue—10YR
- Value—5 or 6, 4 or 5 moist

Chroma—2 to 4
Texture—fine sandy loam or sandy loam
Reaction—slightly alkaline or moderately alkaline

*Bk horizon:*
Hue—10YR
Value—5 or 6, 4 or 5 moist
Chroma—2 to 4
Texture—fine sandy loam or sandy loam, loamy sand in the lower part
Reaction—slightly alkaline or moderately alkaline

## *Haverson Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium
*Landform:* Flood plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 3 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Haverson loam, 0 to 3 percent slopes, rarely flooded, about 1,700 feet north and 1,900 feet west of the southeast corner of sec. 13, T. 15 S., R. 53 W.

A1—0 to 5 inches; brown (10YR 4/3) loam, dark grayish brown (10YR 4/2) moist; weak fine granular structure; slightly hard, very friable; common very fine and fine roots throughout; few very fine and fine pores; slightly effervescent; slightly alkaline; gradual irregular boundary.
A2—5 to 10 inches; brown (10YR 5/3) clay loam, brown (10YR 4/3) moist; weak fine granular structure; slightly hard, very friable; few very fine and fine roots throughout; few very fine and fine pores; slightly effervescent; slightly alkaline; gradual irregular boundary.
A3—10 to 15 inches; brown (10YR 5/3) sandy clay loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; slightly hard, very friable; few very fine and fine roots throughout; few very fine and fine pores; slightly effervescent; slightly alkaline; gradual irregular boundary.
C1—15 to 20 inches; brown (10YR 5/3) clay loam, brown (10YR 4/3) moist; massive; slightly hard, very friable; very few very fine and fine roots throughout; few very fine and fine pores; slightly effervescent; moderately alkaline; gradual irregular boundary.
C2—20 to 25 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 5/3) moist; massive; slightly hard, very friable; very few very fine and fine roots throughout; few very fine and fine pores; slightly effervescent; moderately alkaline; gradual irregular boundary.
C3—25 to 30 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 5/3) moist; massive; slightly hard, very friable; very few very fine and fine roots throughout; few very fine and fine pores; strongly effervescent; strongly alkaline; gradual irregular boundary.
C4—30 to 60 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 5/3) moist; massive; slightly hard, very friable; very few very fine and fine roots throughout; few very fine and fine pores; strongly effervescent; very strongly alkaline.

**Range in Characteristics**

*Depth to secondary calcium carbonate:* 5 to 60 inches

*A horizon:*
Hue—10YR
Value—4 or 5, 3 or 4 moist
Chroma—2 or 3
Texture—loam, sandy clay loam, or clay loam
Reaction—slightly alkaline or moderately alkaline

*C horizon:*
Hue—10YR
Value—5 or 6, 3 or 4 moist
Chroma—2 or 3
Texture—sand, loamy sand, sandy loam, loam, or clay loam
Reaction—moderately alkaline to very strongly alkaline

## *Haversid Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium
*Landform:* Flood plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 3 percent
*MLRA:* 69
*Mean annual precipitation:* 11 to 14 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Haversid silt loam, 0 to 3 percent slopes, about 2,300 feet south and 700 feet west of the northeast corner of sec. 29, T. 33 S., R. 61 W.

A—0 to 14 inches; pale brown (10YR 6/3) silt loam, dark brown (10YR 4/3) moist; weak medium platy structure parting to weak very fine granular; slightly hard, friable, slightly sticky and slightly plastic; violently effervescent; moderately alkaline; clear smooth boundary.

Bn1—14 to 32 inches; light brownish gray (10YR 6/2) loam, dark grayish brown (10YR 4/2) moist; weak coarse platy structure parting to weak medium subangular blocky; hard, friable, slightly sticky and slightly plastic; few crystals of sodium salt; violently effervescent; moderately alkaline; clear smooth boundary.

Bn2—32 to 53 inches; light brownish gray (10YR 6/2) stratified loam and clay loam, dark grayish brown (10YR 4/2) moist; weak coarse platy structure; very hard, firm, slightly sticky and slightly plastic; common fine crystals of sodium salt; violently effervescent; moderately alkaline; gradual smooth boundary.

C—53 to 60 inches; pale brown (10YR 6/3) stratified loam and fine sandy loam, dark brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; violently effervescent; moderately alkaline.

**Range in Characteristics**

*Depth to bedrock:* 60 or more inches
*Depth to sodium salts:* 10 to 40 inches

*C horizon:*
- Texture—stratified silt loam, loam, clay loam, or fine sandy loam
- Clay content—18 to 35 percent
- Salinity—slightly saline or moderately saline; estimated sodium content ranges from 1 to 10 percent
- Reaction—moderately alkaline

## *Haxtun Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium and/or eolian deposits
*Landform:* Drainageways
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 3 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Haxtun-Olnest loamy sands, 0 to 3 percent slopes, about 130 feet west and 2,220 feet south of the northeast corner of sec. 7, T. 14 S., R. 55 W.

Ap—0 to 4 inches; brown (10YR 5/3) loamy sand, dark brown (10YR 3/3) moist; moderate medium granular structure; soft, very friable, nonsticky and nonplastic; slightly effervescent; neutral; clear smooth boundary.

BA—4 to 17 inches; brown (10YR 5/3) sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium prismatic structure parting to weak medium subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; slightly effervescent; neutral; clear wavy boundary.

Bt—17 to 37 inches; brown (10YR 5/3) sandy clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium prismatic structure parting to weak medium subangular blocky; hard, firm, moderately sticky and moderately plastic; few faint clay films on faces of peds; slightly effervescent; neutral; clear irregular boundary.

Btb—37 to 44 inches; grayish brown (10YR 5/2) clay loam, very dark gray (10YR 3/1) moist; weak coarse prismatic structure parting to weak medium subangular blocky; very hard, firm, very sticky and very plastic; few faint clay films on faces of peds; slightly effervescent; few fine faint yellowish brown (10YR 5/6) redoximorphic concentrations; neutral; clear wavy boundary.

Btkyb—44 to 60 inches; grayish brown (10YR 5/2) silt loam, dark gray (10YR 4/1) moist; weak coarse prismatic structure parting to weak medium subangular blocky; very hard, firm, slightly sticky and slightly plastic; few faint clay films on faces of peds; many medium masses of calcium carbonate; violently effervescent; few fine masses of gypsum; few fine faint yellowish brown (10YR 5/6) redoximorphic concentrations; moderately alkaline.

**Range in Characteristics**

*Ap horizon:*
- Hue—10YR
- Value—4 to 6, 3 moist
- Chroma—2 or 3
- Texture—loamy sand or sandy loam
- Reaction—neutral or slightly alkaline

*AB or BA horizon:*
- Hue—10YR
- Value—4 to 6, 3 moist

Chroma—2 or 3
Texture—loamy sand or sandy loam
Reaction—neutral or slightly alkaline

*Bt horizon:*
Hue—10YR
Value—4 or 5, 3 moist
Chroma—2 or 3
Texture—sandy loam or sandy clay loam
Reaction—neutral or slightly alkaline

*Btb horizon:*
Hue—10YR
Value—5 or 6, 3 to 5 moist
Chroma—2 or 3, 1 to 3 moist
Texture—clay loam or sandy clay loam
Reaction—neutral or slightly alkaline

*Btkyb horizon:*
Hue—10YR
Value—5 to 8, 4 to 6 moist
Chroma—2 to 4, 1 to 4 moist
Texture—silt loam, sandy loam, loam, sandy clay loam, or clay loam
Reaction—neutral to moderately alkaline

## *Karval Series*

*Depth class:* Very deep
*Drainage class:* Excessively drained
*Parent material:* Alluvium
*Landform:* Hills
*Elevation:* 4,400 to 6,000 feet
*Slope:* 5 to 25 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Vonid-Karval-Midway complex, 5 to 25 percent slopes, the northeast quarter of the northwest quarter of sec. 26, T. 16 S., R. 55 W.

A—0 to 5 inches; light brownish gray (10YR 6/2) gravelly loamy sand, grayish brown (10YR 5/2) moist; moderate medium granular structure; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; common fine white (10YR 8/1) masses of calcium carbonate between peds; very slightly effervescent between peds; 30 percent fine gravel; moderately acid; clear smooth boundary.
AB—5 to 14 inches; pale brown (10YR 6/3) gravelly coarse sand, light brownish gray (10YR 6/2) moist; weak medium granular structure; slightly hard, very friable, nonsticky and nonplastic; few very fine to medium roots; 20 percent fine gravel; neutral; gradual smooth boundary.
Bk1—14 to 40 inches; light gray (10YR 7/2) gravelly coarse sand, pale brown (10YR 6/3) moist; single grain; few very fine and fine roots; common fine white (10YR 8/1) masses of calcium carbonate; strongly effervescent; 20 percent fine gravel; neutral; gradual smooth boundary.
Bk2—40 to 50 inches; very pale brown (10YR 7/3) gravelly coarse sand, pale brown (10YR 6/3) moist; single grain; many fine white (10YR 8/1) masses of calcium carbonate; very slightly effervescent; 18 percent fine gravel; neutral; gradual smooth boundary.
C—50 to 60 inches; very pale brown (10YR 7/3) sand, light brownish gray (10YR 6/2) moist; single grain; 5 percent fine gravel; neutral.

**Range in Characteristics**

*Depth to calcium carbonate:* 0 to 40 inches

*A horizon:*
Hue—10YR
Value—4 to 6, 3 to 5 moist
Chroma—2 or 3
Texture—sandy loam, loam, gravelly sandy loam, or gravelly loamy sand
Rock fragments—5 to 35 percent
Reaction—moderately acid to moderately alkaline

*AB horizon:*
Hue—7.5YR or 10YR
Value—4 to 7, 4 to 6 moist
Chroma—2 to 4
Texture—gravelly coarse sand, gravelly sand, or gravelly loamy sand
Rock fragments—15 to 35 percent
Reaction—neutral to moderately alkaline

*Bk horizon:*
Hue—7.5YR or 10YR
Value—4 to 7, 4 to 6 moist
Chroma—2 to 4
Texture—gravelly coarse sand, gravelly sand, or gravelly loamy sand
Rock fragments—15 to 35 percent
Calcium carbonate equivalent—2 to 5 percent
Reaction—neutral to moderately alkaline

*Bk and C horizons below 40 inches:*
Hue—7.5YR or 10YR
Value—4 to 7, 4 to 6 moist
Chroma—2 to 4

Texture—coarse sand, sand, loamy sand, gravelly coarse sand, gravelly sand, gravelly loamy sand, gravelly sandy loam, very gravelly sand, very gravelly loamy sand, or very gravelly sandy loam
Rock fragments—5 to 40 percent
Calcium carbonate equivalent—0 to 5 percent
Reaction—neutral to moderately alkaline

## *Keith Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Loess
*Landform:* Hills and plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 10 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Keith silt loam, 1 to 3 percent slopes, northwest quarter of the southwest quarter of sec. 17, T. 7 S., R. 53 W.

A—0 to 5 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; slightly hard, very friable, nonsticky and slightly plastic; slightly alkaline; clear smooth boundary.
BA—5 to 10 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; hard, friable, nonsticky and slightly plastic; slightly alkaline; clear smooth boundary.
Bt—10 to 18 inches; brown (10YR 5/3) silty clay loam, dark brown (10YR 3/3) moist; moderate fine prismatic structure parting to strong fine angular blocky; very hard, firm, moderately sticky and moderately plastic; few faint clay films on faces of peds; slightly alkaline; clear smooth boundary.
Btk—18 to 26 inches; light yellowish brown (10YR 6/4) silty clay loam, brown (10YR 4/3) moist; weak fine prismatic structure parting to moderate fine subangular blocky; hard, firm, slightly sticky and moderately plastic; few faint clay films of faces of peds; few fine masses of calcium carbonate; slightly effervescent; slightly alkaline; clear smooth boundary.
Bk1—26 to 40 inches; light gray (2.5Y 7/2) silt loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many fine masses of calcium carbonate; violently effervescent; moderately alkaline; clear smooth boundary.
Bk2—40 to 60 inches; pale yellow (2.5Y 7/3) silt loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, slightly sticky and nonplastic; few fine masses of calcium carbonate; violently effervescent; moderately alkaline.

**Range in Characteristics**

*A horizon:*
Hue—10YR
Value—4 or 5 dry, 3 moist
Chroma—2 or 3
Texture—silt loam
Reaction—neutral or slightly alkaline

*BA horizon:*
Hue—10YR
Value—4 or 5 dry, 3 moist
Chroma—2 or 3
Texture—silt loam or silty clay loam
Reaction—neutral or slightly alkaline

*Bt and Btk horizons:*
Hue—10YR
Value—4 to 6 dry, 3 or 4 moist
Chroma—2 to 4
Texture—silty clay loam
Reaction—neutral to moderately alkaline

*Bk horizon:*
Hue—2.5Y or 10YR
Value—4 to 7
Chroma—2 to 4
Texture—silt loam
Reaction—slightly alkaline or moderately alkaline

## *Kim Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium and/or eolian deposits
*Landform:* Hills and plains
*Elevation:* 4,400 to 6,000
*Slope:* 1 to 12 percent
*MLRA:* 69
*Mean annual precipitation:* 11 to 14 inches
*Mean annual temperature:* 47 to 51 degrees F

*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Kim-Ildefonso complex, 4 to 12 percent slopes, about 1,020 feet south and 2,300 feet east of the northwest corner of sec. 6, T. 33 S., R. 63 W.

A—0 to 4 inches; pale brown (10YR 6/3) loam, dark brown (10YR 4/3) moist; moderate very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; moderately alkaline; abrupt smooth boundary.
Bw—4 to 11 inches; pale brown (10YR 6/3) loam, brown (10YR 5/3) moist; weak very fine subangular blocky structure; very hard, friable, slightly sticky and slightly plastic; violently effervescent; moderately alkaline; clear smooth boundary.
Bk1—11 to 38 inches; pale brown (10YR 6/3) loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; extremely hard, friable, slightly sticky and slightly plastic; many medium masses of calcium carbonate; violently effervescent; moderately alkaline; gradual smooth boundary.
Bk2—38 to 60 inches; light brownish gray (10YR 6/2) clay loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, firm, slightly sticky and slightly plastic; few medium masses of calcium carbonate; violently effervescent; moderately alkaline.

**Range in Characteristics**

*Texture:* Loam, clay loam, or fine sandy loam
*Clay content:* 18 to 35 percent
*Reaction:* Slightly alkaline or moderately alkaline

## *Kimst Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium and/or eolian deposits
*Landform:* Hills and plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 12 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Kimst loam, 3 to 12 percent slopes, northwest quarter of the northwest quarter of sec. 22, T. 8 S., R. 53 W.

Ap—0 to 5 inches; pale brown (10YR 6/3) loam, brown (10YR 5/3) moist; weak fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; strongly effervescent; moderately alkaline; abrupt smooth boundary.
Bk1—5 to 22 inches; pale brown (10YR 6/3) sandy clay loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many fine masses of calcium carbonate; strongly effervescent; moderately alkaline; clear smooth boundary.
Bk2—22 to 60 inches; pale brown (10YR 6/3) sandy clay loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; common fine masses of calcium carbonate; strongly effervescent; moderately alkaline; clear smooth boundary.

**Range in Characteristics**

*Ap horizon:*
Hue—10YR
Value—5 or 6, 3 to 5 moist
Chroma—2 or 3
Texture—loam
Reaction—slightly alkaline or moderately alkaline

*Bk horizon:*
Hue—10YR
Value—5 or 6, 4 to 6 moist
Chroma—2 to 4
Texture—loam, clay loam, or sandy clay loam
Reaction—slightly alkaline to strongly alkaline

*Lower Bk horizon:*
Hue—2.5Y or 10YR
Value—5 to 7, 5 or 6 moist
Chroma—2 to 4
Texture—loam, clay loam, or sandy clay loam
Reaction—slightly alkaline to strongly alkaline

## *Las Animas Series*

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Parent material:* Alluvium
*Elevation:* 4,400 to 6,000 feet
*Landform:* Flood plains
*Slope:* 0 to 3 percent
*MLRA:* 67 and 69
*Mean Annual precipitation:* 11 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Las Animas loam, 0 to 1 percent slopes, Bent County, Colorado; northwest quarter of sec. 6, T. 23 S., R. 51 W.

A—0 to 6 inches; gray (N 5/0) sandy loam, dark gray (N 4/0) moist; moderate fine granular structure; soft, very friable; strongly effervescent; moderately alkaline; clear smooth boundary.

Bg—6 to 10 inches; light brownish gray (2.5Y 6/2) stratified sandy loam, loamy sand, and loam; grayish brown (2.5Y 5/2) moist; weak coarse subangular blocky structure parting to weak fine granular; slightly hard, very friable; strongly effervescent; common medium prominent yellowish brown (10YR 5/4) moist redoximophic concentrations; moderately alkaline; gradual smooth boundary.

Bkyg—10 to 60 inches; light brownish gray (2.5Y 6/2) stratified sandy loam, loamy sand, and loam; grayish brown (2.5Y 5/2) moist; massive; soft, very friable; few fine masses of calcium carbonate; strongly effervescent; few fine crystals of gypsum; many coarse prominent light olive brown (2.5Y 5/6) moist redoximorphic concentrations and gray (N 5/0) moist redoximorphic depletions; moderately alkaline.

**Range in Characteristics**

*A horizon:*

Hue—5Y to 7.5YR, or is neutral
Value—4 to 6, 3 or 4 moist
Chroma—0 to 2
Texture—sandy loam or loamy sand
Reaction—slightly alkaline or moderately alkaline

*Bg and Bkyg horizons:*

Hue—5Y to 7.5YR, or is neutral
Value—3 to 7
Chroma—0 to 3
Texture—stratified loamy sand, fine sandy loam, sandy loam, or loam
Reaction—slightly alkaline to strongly alkaline

## *Limon Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium
*Landform:* Flood plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 3 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Limon clay, 0 to 3 percent slopes, rarely flooded, about 1,742 feet west and 343 feet north of the southeast corner of sec. 12, T. 17 S., R. 58 W.

A—0 to 6 inches; light brownish gray (10YR 6/2) clay, brown (10YR 4/3) moist; weak fine granular structure; very hard, very firm, very sticky and very plastic; slightly effervescent; strongly alkaline; clear smooth boundary.

Bky—6 to 23 inches; grayish brown (10YR 5/2) clay, brown (10YR 5/3) moist; weak coarse prismatic structure parting to weak medium subangular blocky; very hard, very firm, very sticky and very plastic; few fine masses of calcium carbonate; common fine masses of gypsum; moderately alkaline; gradual smooth boundary.

By1—23 to 38 inches; yellowish brown (10YR 5/4) clay, light olive brown (2.5Y 5/4) moist; massive; extremely hard, very firm, very sticky and very plastic; few fine masses of gypsum; strongly alkaline; gradual wavy boundary.

By2—38 to 49 inches; light yellowish brown (2.5Y 6/4) clay, light olive brown (2.5Y 5/4) moist; massive; extremely hard, very firm, very sticky and very plastic; few fine masses of gypsum; strongly alkaline; gradual wavy boundary.

By3—49 to 60 inches; light yellowish brown (2.5Y 6/4) clay, light olive brown (2.5Y 5/4) moist; massive; extremely hard, very firm, very sticky and very plastic; common fine masses of gypsum; moderately alkaline.

**Range in Characteristics**

*A horizon:*

Hue—2.5Y or 10YR
Value—4 to 6
Chroma—2 or 3
Texture—loam, clay loam, or clay
Reaction—slightly alkaline to strongly alkaline

*Bky horizon:*

Hue—2.5Y or 10YR
Value—4 to 6
Chroma—1 to 3
Texture—clay loam, silty clay loam, or clay
Reaction—slightly alkaline to strongly alkaline

*By horizon:*

Hue—5Y, 2.5Y, or 10YR
Value—4 to 6
Chroma—2 to 4

Texture—clay loam, silty clay loam, or clay
Reaction—slightly alkaline to strongly alkaline

## *Manzanola Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium
*Landform:* Drainageways and fans
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 5 percent
*MLRA:* 69
*Mean annual precipitation:* 14 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

### Typical Pedon

Manzanola clay loam, 0 to 3 percent slopes, Crowley County, Colorado; 0.15 mile north of the southeast corner of sec. 7, T. 21 S., R. 55 W.

A—0 to 5 inches; grayish brown (2.5Y 5/2) clay loam, dark grayish brown (2.5Y 4/2) moist; strong very fine granular structure; soft, very friable, slightly sticky and slightly plastic; slightly effervescent; slightly alkaline; clear smooth boundary.
Bt1—5 to 8 inches; grayish brown (10YR 5/2) clay loam, dark grayish brown (10YR 4/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few distinct clay films on faces of peds and in root channels and pores; slightly effervescent; moderately alkaline; clear smooth boundary.
Bt2—8 to 20 inches; brown (10YR 5/3) clay loam, dark brown (10YR 4/3) moist; weak medium prismatic structure parting to medium and fine angular blocky; slightly hard, friable, sticky and plastic; few prominent clay films on faces of peds and in root channels and pores; slightly effervescent; moderately alkaline; gradual wavy boundary.
Btk—20 to 30 inches; light yellowish brown (2.5Y 6/3) clay loam, light olive brown (2.5Y 5/3) moist; weak medium prismatic structure parting to medium subangular blocky; hard, friable, slightly sticky and slightly plastic; few faint clay films on faces of peds and in root channels and pores; common masses and concretions of calcium carbonate; strongly effervescent; moderately alkaline; gradual wavy boundary.
Bk—30 to 60 inches; pale yellow (2.5Y 7/3) clay loam, light olive brown (2.5Y 5/3) moist; massive; hard, friable, slightly sticky and slightly plastic; common fine and medium masses and concretions of calcium carbonate; strongly effervescent; moderately alkaline.

### Range of Characteristics

*A horizon:*
Hue—7.5YR to 5Y
Value—4 to 7, 3 to 6 moist
Chroma—1 to 4
Texture—clay loam or silty clay loam
Reaction—slightly alkaline to strongly alkaline

*Bt horizon:*
Hue—7.5YR to 5Y
Value—5 to 7, 4 to 6 moist
Chroma—1 to 6
Texture—clay loam, silty clay loam, or clay
Reaction—slightly alkaline to strongly alkaline

*Btk and Bk horizons:*
Hue—7.5YR to 5Y
Value—6 or 7, 4 or 5 moist
Chroma—2 to 4
Texture—clay loam, silty clay loam, clay, or loam
Calcium carbonate equivalent—4 to 14 percent
Reaction—moderately alkaline to very strongly alkaline

## *Manzanst Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium
*Landform:* Drainageways, fans, and flood plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 5 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

### Typical Pedon

Manzanst clay loam, 1 to 5 percent slopes, southwest quarter of the southeast quarter of sec. 7, T. 13 S., R. 52 W.

A—0 to 8 inches; light brownish gray (2.5Y 6/2) clay loam, grayish brown (2.5Y 5/2) moist; moderate medium granular structure; very hard, firm, slightly sticky and moderately plastic; many fine and medium roots; slightly alkaline; clear smooth boundary.
Btk1—8 to 18 inches; light brownish gray (2.5Y 6/2) clay loam, grayish brown (2.5Y 5/2) moist; moderate medium angular blocky structure; very

hard, friable, moderately sticky and moderately plastic; few fine roots; few very fine pores; very few faint clay films on faces of peds; common medium masses of calcium carbonate; strongly effervescent; 2 percent fine gravel; slightly alkaline; clear smooth boundary.

Btk2—18 to 30 inches; light yellowish brown (2.5Y 6/3) silty clay loam, grayish brown (2.5Y 5/2) moist; moderate medium angular blocky structure parting to moderate fine angular blocky; very hard, friable, moderately sticky and moderately plastic; few fine roots; few very fine pores; very few faint clay films on faces of peds; common medium masses of calcium carbonate; strongly effervescent; slightly alkaline; clear smooth boundary.

Bk—30 to 40 inches; light yellowish brown (2.5Y 6/3) silty clay, grayish brown (2.5Y 5/2) moist; weak medium angular blocky structure; very hard, friable, moderately sticky and moderately plastic; few very fine and fine roots; few very fine pores; common medium masses of calcium carbonate; strongly effervescent; slightly alkaline; clear smooth boundary.

By—40 to 60 inches; light gray (2.5Y 7/2) silty clay loam, light olive brown (2.5Y 5/3) moist; massive; very hard, friable, moderately sticky and moderately plastic; very few very fine and fine roots; slightly effervescent; common fine and medium crystals of gypsum; moderately alkaline.

**Range in Characteristics**

• Some pedons have BA and BC horizons.

*A horizon:*
Hue—10YR or 2.5Y
Value—5 or 6, 3 to 5 moist
Chroma—2 or 3
Texture—loam, clay loam, silty clay loam, or clay
Reaction—neutral to moderately alkaline

*Btk and Bk horizons:*
Hue—10YR or 2.5Y
Value—4 to 7, 4 or 5 moist
Chroma—2 to 4
Texture—silty clay loam, clay loam, clay, or silty clay
Reaction—slightly alkaline to strongly alkaline

*By horizon:*
Hue—10YR or 2.5Y
Value—5 to 7, 4 or 5 moist
Chroma—2 to 4
Texture—silty clay loam, clay loam, or clay
Reaction—moderately alkaline or strongly alkaline

## *Midway Series*

*Depth class:* Shallow
*Drainage class:* Well drained
*Parent material:* Residuum from shale
*Landform:* Hills
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 40 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Olney-Midway complex, 3 to 12 percent slopes, sec. 23, T. 15 S., R. 57 W.

A—0 to 4 inches; brown (10YR 5/3) clay loam, brown (10YR 4/3) moist; weak fine granular structure; slightly hard, friable, moderately sticky and moderately plastic; strongly effervescent; moderately alkaline; abrupt smooth boundary.

AB—4 to 10 inches; light brownish gray (2.5Y 6/2) clay loam, light olive brown (2.5Y 5/4) moist; weak fine subangular blocky structure; hard, firm, very sticky and very plastic; strongly effervescent; moderately alkaline; clear smooth boundary.

By—10 to 15 inches; light brownish gray (2.5Y 6/2) clay loam, grayish brown (2.5Y 5/2) moist; massive; hard, firm, moderately sticky and moderately plastic; strongly effervescent; many fine masses of gypsum; moderately alkaline; abrupt smooth boundary.

Cr—15 inches; shale.

**Range in Characteristics**

*A horizon:*
Hue—2.5Y or 10YR
Value—4 to 6
Chroma—2 to 4
Texture—silty clay loam, clay loam, or clay
Reaction—slightly alkaline or moderately alkaline

*AB and By horizons:*
Hue—2.5Y or 10YR
Value—4 to 7
Chroma—2 to 4
Texture—clay loam or clay

Reaction—slightly alkaline or moderately alkaline

## *Nunn Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium
*Landform:* Drainageways, fans, and terraces
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 5 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Nunn-Sampson, rarely flooded, complex, 0 to 3 percent slopes, about 320 feet south and 2,200 feet east of the northwest corner of sec. 7, T. 7 S., R. 53 W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium granular structure; hard, friable, moderately sticky and moderately plastic; neutral; abrupt smooth boundary.
Bt1—5 to 12 inches; very dark grayish brown (10YR 3/2) clay, very dark grayish brown (10YR 3/2) moist; moderate medium prismatic structure parting to moderate medium angular blocky; very hard, firm, moderately sticky and moderately plastic; common faint clay films on faces of peds; neutral; clear smooth boundary.
Bt2—12 to 19 inches; brown (10YR 5/3) sandy clay loam, brown (10YR 4/3) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; hard, friable, moderately sticky and slightly plastic; few faint clay films on faces of peds; neutral; clear smooth boundary.
Bk1—19 to 42 inches; pale brown (10YR 6/3) sandy loam, pale brown (10YR 6/3) moist; massive; slightly hard, very friable, slightly sticky and nonplastic; many fine masses of calcium carbonate; violently effervescent; moderately alkaline; clear smooth boundary.
Bk2—42 to 60 inches; brown (10YR 5/3) sandy loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, slightly sticky and moderately plastic; few fine masses of calcium carbonate; violently effervescent; moderately alkaline.

**Range in Characteristics**

- Some pedons have AB and BC horizons.

Ap and A horizons:
Hue—10YR
Value—4 or 5, 3 moist
Chroma—2 or 3
Texture—loam or clay loam
Reaction—neutral

*Bt horizon:*
Hue—10YR
Value—3 to 6
Chroma—2 or 3
Texture—clay loam, sandy clay loam, sandy clay, or clay
Reaction—neutral or slightly alkaline

*Bk horizon:*
Hue—10YR
Value—5 to 7
Chroma—2 to 4
Texture—sandy loam, loam, clay loam, or sandy clay loam
Reaction—slightly alkaline or moderately alkaline

## *Olnest Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Eolian deposits
*Landform:* Hills and plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 12 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Haxtun-Olnest loamy sands, 0 to 3 percent slopes, about 820 feet south and 336 feet east of the northwest corner of sec. 8, T. 14 S., R. 55 W.

Ap—0 to 8 inches; brown (10YR 5/3) loamy sand, dark grayish brown (10YR 4/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; common very fine to medium roots; neutral; abrupt smooth boundary.
Bt1—8 to 24 inches; brown (10YR 5/3) sandy clay loam, brown (10YR 4/3) moist; moderate coarse prismatic structure parting to moderate medium

and coarse subangular blocky; hard , friable, slightly sticky and slightly plastic; common very fine to medium roots; very few distinct clay films on faces of peds; neutral; clear smooth boundary.

Bt2—24 to 30 inches; yellowish brown (10YR 5/4) sandy clay loam, brown (10YR 4/3) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; hard, firm, moderately sticky and moderately plastic; common very fine to medium roots; very few prominent clay films on faces of peds; slightly alkaline; clear smooth boundary.

Bt3—30 to 38 inches; light yellowish brown (10YR 6/4) sandy clay loam, brown (10YR 4/3) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; hard, firm, moderately sticky and moderately plastic; common very fine to medium roots; very few distinct clay films on faces of peds; slightly alkaline; clear smooth boundary.

Bk1—38 to 53 inches; pale brown (10YR 6/3) loam, brown (10YR 5/3) moist; weak coarse prismatic structure parting to weak coarse subangular blocky; slightly hard, firm, slightly sticky and moderately plastic; few very fine and fine roots; common fine masses of calcium carbonate; violently effervescent; moderately alkaline; gradual smooth boundary.

Bk2—53 to 60 inches; pale brown (10YR 6/3) sandy clay loam, brown (10YR 5/3) moist; weak coarse prismatic structure parting to weak coarse subangular blocky; slightly hard, firm, slightly sticky and moderately plastic; few very fine and fine roots; common fine masses of calcium carbonate; violently effervescent; moderately alkaline.

**Range in Characteristics**

*Ap horizon:*

Hue—10YR
Value—4 or 5, 3 or 4 moist
Chroma—3 or 4, 2 to 4 moist
Texture—loamy sand or sandy loam
Reaction—neutral or slightly alkaline

*Bt horizon:*

Hue—10YR
Value—4 to 6, 4 or 5 moist
Chroma—3 or 4
Texture—sandy loam or sandy clay loam
Reaction—neutral to moderately alkaline

*Bk horizon:*

Hue—10YR
Value—6 or 7, 5 or 6 moist
Chroma—3 or 4
Texture—loamy sand, sandy loam, sandy clay loam, or loam
Reaction—moderately alkaline or strongly alkaline

## *Olney Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Eolian deposits
*Landform:* Plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 12 percent
*MLRA:* 69
*Mean annual precipitation:* 11 to 14 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Olney sandy loam (fig. 10), 1 to 3 percent slopes, about 120 feet south and 1,380 feet east of the northwest corner of sec. 13, T. 14 S., R. 59 W.

A—0 to 4 inches; brown (10YR 5/3) sandy loam, brown (7.5YR 4/4) moist; weak fine granular structure; slightly hard, firm, nonsticky; 1 percent fine gravel; neutral; clear smooth boundary.

Bt1—4 to 12 inches; brown (7.5YR 5/4) sandy clay loam, dark brown (7.5YR 3/4) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; hard, firm, slightly sticky; common distinct clay films on faces of peds; 3 percent fine gravel; neutral; clear smooth boundary.

Bt2—12 to 18 inches; yellowish brown (10YR 5/4) sandy clay loam, brown (7.5YR 4/4) moist; weak medium prismatic structure parting to weak medium subangular blocky; slightly hard, firm, slightly sticky; common distinct clay films on faces of peds; 3 percent fine gravel; neutral; clear smooth boundary.

Bt3—18 to 24 inches; pale brown (10YR 6/3) sandy loam, brown (7.5YR 5/4) moist; weak medium prismatic structure parting to weak medium subangular blocky; soft, friable, nonsticky; few faint clay films on faces of peds; 5 percent fine gravel; slightly alkaline; clear smooth boundary.

Bk1—24 to 31 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky; few medium masses of calcium carbonate; slightly effervescent; 10 percent fine gravel; slightly alkaline; clear smooth boundary.



**Figure 10.—Profile of Olney sandy loam.**

Bk2—31 to 60 inches; light gray (10YR 7/2) loamy sand, light brownish gray (10YR 6/2) moist; single grain; soft, very friable, slightly sticky; few medium masses of calcium carbonate; strongly effervescent; 10 percent fine gravel; moderately alkaline.

**Range in Characteristics**

*A horizon:*
- Hue—10YR or 7.5YR
- Value—4 or 5, 3 or 4 moist
- Chroma—3 or 4, 2 to 4 moist
- Texture—loamy sand or sandy loam
- Reaction—neutral or slightly alkaline

*Bt horizon:*
- Hue—10YR or 7.5YR
- Value—4 to 6, 3 to 5 moist
- Chroma—3 or 4
- Texture—sandy loam or sandy clay loam
- Reaction—neutral to moderately alkaline

*Bk horizon:*
- Hue—10YR or 7.5YR
- Value—6 or 7, 5 or 6 moist
- Chroma—2 to 4
- Texture—sandy loam, sandy clay loam, or loamy sand
- Reaction—slightly alkaline to strongly alkaline

## *Otero Series*

*Depth class:* Very deep
*Drainage class:* Somewhat excessively drained
*Parent material:* Eolian deposits
*Landform:* Hills
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 5 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Otero sandy loam, 1 to 5 percent slopes, about 2,620 feet north and 440 feet east of the southwest corner of sec. 11, T. 13 S., R. 56 W.

Ap1—0 to 3 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; slightly hard, very friable, slightly sticky and nonplastic; few very fine roots; slightly effervescent; slightly alkaline; clear smooth boundary.

Ap2—3 to 6 inches; brown (10YR 5/3) sandy loam, dark grayish brown (10YR 4/2) moist; weak fine granular structure; slightly hard, very friable, slightly sticky and nonplastic; few very fine roots; slightly effervescent; slightly alkaline; clear smooth boundary.

AB—6 to 13 inches; brown (10YR 5/3) sandy loam,

dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; hard, very friable, slightly sticky and nonplastic; few very fine roots; slightly effervescent; slightly alkaline; clear smooth boundary.

Bk1—13 to 28 inches; very pale brown (10YR 7/3) sandy loam, pale brown (10YR 6/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few medium masses of calcium carbonate; violently effervescent; moderately alkaline; clear smooth boundary.

Bk2—28 to 60 inches; very pale brown (10YR 7/3) sandy loam, pale brown (10YR 6/3) moist; massive; hard, friable, moderately sticky and slightly plastic; many medium masses of calcium carbonate; violently effervescent; moderately alkaline.

**Range in Characteristics**

*Ap horizon:*
Hue—10YR
Value—5 or 6, 3 to 5 moist
Chroma—2 or 3
Texture—sandy loam
Reaction—neutral to moderately alkaline

*AB horizon:*
Hue—10YR
Value—5 or 6, 4 or 5 moist
Chroma—3 or 4, 2 to 4 moist
Texture—sandy loam
Reaction—slightly alkaline or moderately alkaline

*Bk horizon:*
Hue—10YR
Value—6 or 7, 5 or 6 moist
Chroma—3 or 4, 3 to 6 moist
Texture—sandy loam
Reaction—slightly alkaline or moderately alkaline

## *Oterodry Series*

*Depth class:* Very deep
*Drainage class:* Somewhat excessively drained
*Parent material:* Eolian deposits
*Landform:* Hills
*Elevation:* 4,400 to 6,000
*Slope:* 1 to 9 percent
*MLRA:* 69
*Mean annual precipitation:* 11 to 14 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Kim-Oterodry fine sandy loams, 2 to 7 percent slopes, about 1,300 feet south and 2,500 feet east of the northwest corner of sec. 2, T. 28 S., R. 64 W.

A—0 to 11 inches; pale brown (10YR 6/3) fine sandy loam, dark brown (10YR 4/3) moist; weak fine granular structure; slightly hard, very friable, nonsticky and nonplastic; strongly effervescent; moderately alkaline; clear smooth boundary.

AB—11 to 25 inches; pale brown (10YR 6/3) fine sandy loam, brown (10YR 5/3) moist; weak coarse subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; strongly effervescent; moderately alkaline; clear smooth boundary.

Bk—25 to 60 inches; pale brown (10YR 6/3) fine sandy loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few masses of calcium carbonate; strongly effervescent; moderately alkaline.

**Range in Characteristics**

*Texture:* Fine sandy loam or sandy loam
*Clay content:* 5 to 18 percent
*Reaction:* Slightly alkaline or moderately alkaline

## *Platner Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium and/or eolian deposits
*Landform:* Plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 5 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Platner loam, 0 to 3 percent slopes, about 200 feet east and 780 feet south of the northwest corner of sec. 30, T. 12 S., R. 56 W.

A—0 to 7 inches; brown (10YR 5/3) loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; hard, very friable, slightly sticky and slightly plastic; many fine to coarse roots; neutral; abrupt smooth boundary.

Bt1—7 to 9 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; very hard, firm, moderately sticky

and moderately plastic; many fine to coarse roots; few faint clay films on faces of peds; neutral; abrupt smooth boundary.

Bt2—9 to 15 inches; yellowish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium prismatic structure parting to strong fine angular blocky; very hard, firm, very sticky and moderately plastic; many fine to coarse roots; few faint clay films on faces of peds; neutral; abrupt wavy boundary.

Btk—15 to 22 inches; brown (10YR 5/3) clay loam, brown (10YR 4/3) moist; moderate medium prismatic structure parting to moderate fine angular blocky; hard, firm, moderately sticky and moderately plastic; many fine to coarse roots; few faint clay films on faces of peds; few fine masses of calcium carbonate; moderately alkaline; clear wavy boundary.

Bk1—22 to 40 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 5/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common medium masses of calcium carbonate; violently effervescent; moderately alkaline; gradual wavy boundary.

Bk2—40 to 50 inches; very pale brown (10YR 7/3) clay loam, brown (10YR 5/3) moist; massive; slightly hard, friable, moderately sticky and moderately plastic; few fine masses of calcium carbonate; violently effervescent; moderately alkaline; gradual wavy boundary.

Bk3—50 to 60 inches; reddish yellow (7.5YR 7/6) clay loam, strong brown (7.5YR 5/6) moist; weak coarse subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; many coarse masses of calcium carbonate; violently effervescent; strongly alkaline.

**Range in Characteristics**

*A horizon:*
Hue—10YR
Value—4 or 5, 2 or 3 moist
Chroma—2 or 3
Texture—sandy loam or loam
Reaction—neutral

*Bt and Btk horizons:*
Hue—10YR or 2.5Y
Value—4 or 5, 3 or 4 moist
Chroma—2 to 4
Texture—sandy clay, clay loam, or clay
Reaction—neutral to moderately alkaline

*Bk horizon:*
Hue—10YR or 2.5Y
Value—5 or 6, 4 or 5 moist
Chroma—2 or 3
Texture—silty clay loam or clay loam
Reaction—moderately alkaline

*Lower Bk horizon:*
Hue—7.5YR to 2.5Y
Value—5 to 7, 4 or 5 moist
Chroma—3 to 6, 2 to 6 moist
Texture—loamy sand, sandy loam, loam, sandy clay loam, or clay loam
Reaction—moderately alkaline or strongly alkaline

## *Pleasant Series*

*Depth class:* Very deep
*Drainage class:* Moderately well drained
*Parent material:* Alluvium
*Landform:* Depressions
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 2 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Pleasant loam, 0 to 1 percent slopes, rarely ponded, northeast quarter of the northeast quarter of sec. 27, T. 7 S., R. 52 W.

A—0 to 2 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; neutral; abrupt smooth boundary.

Bt1—2 to 21 inches; dark gray (10YR 4/1) clay, very dark gray (10YR 3/1) moist; moderate medium prismatic structure parting to moderate medium angular blocky; extremely hard, firm, moderately sticky and moderately plastic; many distinct clay films on faces of peds; slightly alkaline; clear smooth boundary.

Bt2—21 to 40 inches; dark gray (10YR 4/1) clay, dark gray (10YR 4/1) moist; moderate medium angular blocky structure; extremely hard, firm, moderately sticky and moderately plastic; many distinct clay films on faces of peds; moderately alkaline; clear smooth boundary.

C—40 to 60 inches; grayish brown (10YR 5/2) silty clay loam, dark gray (10YR 4/1) moist; weak medium subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; moderately alkaline.

**Range in Characteristics**

*A horizon:*
Hue—10YR
Value—4 or 5, 2 or 3 moist
Chroma—2 or 3
Texture—loam
Reaction—neutral

*Bt horizon:*
Hue—10YR
Value—4 or 5, 3 or 4 moist
Chroma—1 to 3
Texture—clay
Reaction—slightly alkaline or moderately alkaline

*C horizon:*
Hue—10YR
Value—5 or 6, 4 or 5 moist
Chroma—1 to 3
Texture—silty clay loam
Reaction—moderately alkaline

## *Rago Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium
*Landform:* Flood plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 2 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Rago silt loam, 0 to 2 percent slopes, rarely flooded, southwest quarter of sec. 17, T. 11 S., R. 55 W.

Ap—0 to 5 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; neutral; clear smooth boundary.

BA—5 to 10 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak medium prismatic structure parting to moderate coarse subangular blocky; slightly hard, very friable, moderately sticky and moderately plastic; neutral; clear smooth boundary.

Bt—10 to 19 inches; grayish brown (10YR 5/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; weak medium prismatic structure parting to moderate medium subangular blocky; hard, firm, moderately sticky and moderately plastic; common distinct clay films on faces of peds; neutral; abrupt smooth boundary.

Btb—19 to 27 inches; dark gray (10YR 4/1) silty clay, very dark gray (10YR 3/1) moist; moderate medium prismatic structure parting to strong medium and coarse angular blocky; very hard, very firm, very sticky and very plastic; common faint clay films on faces of peds; slightly alkaline; clear smooth boundary.

Btkb1—27 to 31 inches; grayish brown (2.5Y 5/2) silty clay, dark grayish brown (2.5Y 4/2) moist; moderate medium prismatic structure parting to strong medium angular blocky; very hard, very firm, very sticky and very plastic; many distinct clay films on faces of peds; few fine masses of calcium carbonate; slightly alkaline; clear smooth boundary.

Btkb2—31 to 47 inches; light brownish gray (2.5Y 6/2) silty clay loam, grayish brown (2.5Y 5/2) moist; weak coarse prismatic structure parting to moderate medium angular blocky; hard, firm, moderately sticky and moderately plastic; common distinct clay films on faces of peds; common medium masses of calcium carbonate; slightly effervescent; slightly alkaline; gradual wavy boundary.

Bk1—47 to 55 inches; light gray (2.5Y 7/2) silt loam, light brownish gray (2.5Y 6/2) moist; massive; slightly hard, friable, moderately sticky and moderately plastic; many fine and medium masses of calcium carbonate; strongly effervescent; moderately alkaline; gradual wavy boundary.

Bk2—55 to 60 inches; light gray (2.5Y 7/2) silt loam, light brownish gray (2.5Y 6/2) moist; massive; slightly hard, friable, moderately sticky and moderately plastic; few fine masses of calcium carbonate; strongly effervescent; moderately alkaline.

**Range in Characteristics**

*Ap horizon:*
Hue—10YR
Value—4 or 5, 3 moist
Chroma—2 or 3
Texture—silt loam or silty clay loam
Reaction—neutral

*Bt and Btb horizons:*
Hue—10YR or 2.5Y
Value—4 to 6, 3 to 5 moist
Chroma—1 to 3
Texture—silty clay or silty clay loam
Reaction—neutral or slightly alkaline

*Btkb horizon:*
Hue—10YR or 2.5Y
Value—4 to 6, 2 to 5 moist
Chroma—1 to 3
Texture—silty clay or silty clay loam
Reaction—slightly alkaline or moderately alkaline

*Bk horizon:*
Hue—10YR or 2.5Y
Value—4 to 7, 4 to 6 moist
Chroma—2 or 3
Texture—silt loam or silty clay loam
Reaction—moderately alkaline

## *Razor Series*

*Depth class:* Moderately deep
*Drainage class:* Well drained
*Parent material:* Alluvium and residuum from shale
*Landform:* Hills
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 15 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Razor clay loam, moist, 1 to 5 percent slopes, about 45 feet south and 2,005 feet east of the northwest corner of sec. 16, T. 10 S., R. 54 W.

A—0 to 2 inches; light brownish gray (2.5Y 6/2) clay loam, dark grayish brown (2.5Y 4/2) moist; moderate fine granular structure; soft, friable, moderately sticky and very plastic; slightly effervescent; moderately alkaline; clear smooth boundary.
BA—2 to 5 inches; grayish brown (2.5Y 5/2) silty clay, dark grayish brown (2.5Y 4/2) moist; moderate medium subangular blocky structure; hard, firm, moderately sticky and very plastic; strongly effervescent; moderately alkaline; clear smooth boundary.
Bw—5 to 15 inches; light brownish gray (2.5Y 6/2) silty clay, grayish brown (2.5Y 5/2) moist; moderate coarse prismatic structure parting to moderate medium subangular blocky; extremely hard, firm, moderately sticky and very plastic; strongly effervescent; moderately alkaline; clear smooth boundary.
By—15 to 21 inches; light brownish gray (2.5Y 6/2) silty clay, grayish brown (2.5Y 5/2) moist; weak coarse prismatic structure; extremely hard, firm, moderately sticky and very plastic; violently effervescent; few fine masses of gypsum; strongly alkaline; gradual wavy boundary.
Bky—21 to 27 inches; light brownish gray (2.5Y 6/2) silty clay, grayish brown (2.5Y 5/2) moist; massive; very hard, friable, moderately sticky and very plastic; few fine masses of calcium carbonate; stongly effervescent; few fine and medium masses of gypsum; 10 percent channers; moderately alkaline; clear wavy boundary.
Cr—27 to 60 inches; light brownish gray (2.5Y 6/2) shale; strongly effervescent.

**Range in Characteristics**

*A horizon:*
Hue—10YR or 2.5Y
Value—5 or 6, 4 or 5 moist
Chroma—2 or 3
Texture—clay loam or silty clay loam
Reaction—slightly or moderately alkaline

*Bw and By horizons:*
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—silty clay loam, clay loam, or silty clay
Reaction—moderately alkaline or strongly alkaline

*Bky horizon:*
Hue—2.5Y
Value—5 or 6
Chroma—2 or 3
Texture—clay, clay loam, or silty clay
Reaction—slightly alkaline to strongly alkaline

## *Sampson Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium
*Landform:* Flood plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 3 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Sampson loam, 0 to 2 percent slopes, rarely flooded, southwest quarter of sec. 1, T. 8 S., R. 56 W.

A—0 to 7 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist;

moderate fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; neutral; clear smooth boundary.

BA—7 to 12 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure parting to moderate fine subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; neutral; clear smooth boundary.

Bt1—12 to 24 inches; dark grayish brown (10YR 4/2) clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium prismatic structure parting to strong medium subangular blocky; very hard, friable, moderately sticky and moderately plastic; common very fine roots; few very fine pores; few faint very dark grayish brown (10YR 3/2) clay films on faces of peds; 1 percent gravel; neutral; clear smooth boundary.

Bt2—24 to 30 inches; dark grayish brown loam, very dark grayish brown (10YR 3/2) moist; weak medium prismatic structure parting to moderate medium subangular blocky; very hard, friable, moderately sticky and moderately plastic; few very fine roots and pores; very few faint very dark grayish brown (10YR 3/2) clay films on faces of peds; 1 percent gravel; neutral; clear smooth boundary.

Btk—30 to 36 inches; very dark grayish brown (10YR 3/2) loam, very dark brown (10YR 2/2) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; very hard, friable, moderately sticky and moderately plastic; few very fine roots and pores; very few faint very dark grayish brown (10YR 3/2) clay films on faces of peds; common fine masses of calcium carbonate; strongly effervescent; 2 percent gravel; slightly alkaline; clear smooth boundary.

Bk1—36 to 50 inches; light brownish gray (10YR 6/2) loam, brown (10YR 5/3) moist; weak coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots and pores; few distinct very dark grayish brown (10YR 3/2) organic coats; common fine and medium masses of calcium carbonate; violently effervescent; 2 percent gravel; moderately alkaline; clear smooth boundary.

Bk2—50 to 60 inches; very pale brown (10YR 7/3) loam, brown (10YR 5/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common fine and medium masses of calcium carbonate; violently effervescent; 2 percent gravel; moderately alkaline.

**Range in Characteristics**

*Depth to secondary calcium carbonate:* 23 to 60 inches

*A horizon:*
- Hue—10YR
- Value—4 or 5, 2 or 3 moist
- Chroma—2
- Texture—loam or clay loam
- Reaction—neutral or slightly alkaline

*Bt and Btk horizons:*
- Hue—10YR
- Value—3 to 6, 3 or 4 moist
- Chroma—1 to 3
- Texture—loam or clay loam
- Reaction—neutral or slightly alkaline

*Bk horizon:*
- Hue—10YR
- Value—5 to 7, 4 to 6 moist
- Chroma—2 or 3
- Texture—loamy sand, loam, sandy clay loam, gravelly sandy clay loam, or clay loam
- Reaction—neutral to moderately alkaline

## *Satanta Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium and/or eolian deposits
*Landform:* Terraces
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 3 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Satanta loam, 1 to 3 percent slopes, about 1,890 feet west and 216 feet north of the southeast corner of sec. 15, T. 7 S., R. 54 W.

A—0 to 4 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many fine roots; few medium pores; 2 percent gravel; neutral; clear smooth boundary.

Bt1—4 to 12 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; moderate medium prismatic structure parting to moderate fine and medium subangular blocky;

hard, friable, moderately sticky and slightly plastic; common fine roots; few medium pores; very few faint very dark grayish brown (10YR 3/2 moist) clay films on faces of peds and in pores; neutral; clear smooth boundary.

Bt2—12 to 19 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few fine roots; common medium pores; very few faint very dark grayish brown (10YR 3/2 moist) clay films in root channels and pores; 5 percent gravel; neutral; clear smooth boundary.

Bk1—19 to 28 inches; light brownish gray (10YR 6/2) loam, dark grayish brown (10YR 4/2) moist; weak coarse subangular blocky structure; slightly hard, very friable, moderately sticky and nonplastic; few fine roots; few medium pores; few fine masses of calcium carbonate; strongly effervescent; 5 percent gravel; moderately alkaline; clear smooth boundary.

Bk2—28 to 60 inches; light brownish gray (10YR 6/2) loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, moderately sticky and nonplastic; few fine roots; few medium pores; few fine masses of calcium carbonate; strongly effervescent; 2 percent gravel; moderately alkaline.

**Range in Characteristics**

*Rock fragments:* Less than 5 percent throughout
*Depth to secondary calcium carbonate:* 14 to 33 inches

*A horizon:*
- Hue—10YR
- Value—3 to 5, 3 or 4 moist
- Chroma—2 or 3
- Texture—loam or sandy clay loam
- Reaction—neutral or slightly alkaline

*Bt or Btk horizon:*
- Hue—10YR
- Value—4 to 6, 3 to 5 moist
- Chroma—2 to 4
- Texture—sandy loam, loam, sandy clay loam, or clay loam
- Reaction—neutral to moderately alkaline

*Bk horizon:*
- Hue—7.5YR or 10YR
- Value—5 to 7, 4 to 6 moist
- Texture—sandy loam, loam, sandy clay loam, silt loam, or clay loam
- Reaction—neutral to strongly alkaline

## *Seldom Series*

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Parent material:* Alluvium and/or eolian deposits
*Landform:* Flood plains or hills
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 25 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Seldom sandy loam, 0 to 3 percent slopes, rarely flooded, about 1,450 feet east and 1,700 feet north of the southwest corner of sec. 21, T. 15 S., R. 58 W.

A1—0 to 7 inches; dark grayish brown (10YR 4/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, very friable, nonsticky and nonplastic; many fine and medium roots; neutral; clear smooth boundary.

A2—7 to 15 inches; dark grayish brown (10YR 4/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; hard, friable, nonsticky and nonplastic; few fine roots; slightly effervescent; moderately alkaline; clear smooth boundary.

Bkg1—15 to 34 inches; light brownish gray (10YR 6/2) sandy loam, grayish brown (10YR 5/2) moist; weak fine subangular blocky structure; very hard, friable, slightly sticky and slightly plastic; few fine roots; few fine masses of calcium carbonate; violently effervescent; few fine distinct yellowish brown (10YR 5/6) redoximorphic concentrations; very strongly alkaline; clear smooth boundary.

Bkg2—34 to 42 inches; white (10YR 8/1) sandy loam, light brownish gray (10YR 6/2) moist; massive; very hard, friable, slightly sticky and slightly plastic; few fine roots; few fine masses of calcium carbonate; violently effervescent; few fine faint gray (10YR 6/1) redoximorphic depletions and few fine distinct yellowish brown (10YR 5/6) redoximorphic concentrations; very strongly alkaline; gradual smooth boundary.

Bkg3—42 to 60 inches; white (10YR 8/1) stratified sandy loam and sandy clay loam, light brownish gray (10YR 6/2) moist; massive; hard, friable, slightly sticky and nonplastic; few fine roots; few fine masses of calcium carbonate; violently

effervescent; few fine prominent yellowish brown (10YR 5/6) redoximorphic concentrations; moderately alkaline.

**Range in Characteristics**

*A horizon:*
Hue—10YR
Value—4 or 5, 2 or 3 moist
Chroma—1 to 3
Texture—sandy loam
Reaction—neutral to moderately alkaline

*Upper Bkg horizon:*
Hue—10YR or 2.5Y
Value—6 to 8, 4 to 6 moist
Chroma—1 or 2
Texture—sandy loam
Calcium carbonate equivalent—0 to 15 percent
Reaction—moderately alkaline to very strongly alkaline

*Lower Bkg horizon:*
Hue—10YR, 2.5Y, or 5Y
Value—6 to 8, 5 or 6 moist
Chroma—1 or 2
Texture—loamy sand, sandy loam, loam, silty clay loam, sandy clay loam, or sandy clay (textures are often stratified)
Calcium carbonate equivalent—5 to 20 percent
Reaction—moderately alkaline to very strongly alkaline

## *Shingle Series*

*Depth class:* Shallow
*Drainage class:* Well drained
*Parent material:* Residuum from shale
*Landform:* Hills
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 9 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Shingle-Midway complex, moist, 1 to 9 percent slopes, about 1,800 feet north and 159 feet west of the southeast corner of sec. 3, T. 9 S., R. 56 W.

Ap—0 to 4 inches; light brownish gray (2.5Y 6/2) silty clay loam, grayish brown (2.5Y 5/2) moist; weak fine granular structure; slightly hard, very friable, moderately sticky and moderately plastic; strongly effervescent; 5 percent fine gravel; slightly alkaline; abrupt smooth boundary.
Bk—4 to 15 inches; light brownish gray (2.5Y 6/2) silty clay loam, grayish brown (2.5Y 5/2) moist; massive; slightly hard, very friable, moderately sticky and moderately plastic; many fine masses of calcium carbonate; strongly effervescent; 10 percent channers; slightly alkaline; clear smooth boundary.
Cr—15 to 60 inches; light brownish gray (2.5Y 6/2) shale; slightly effervescent.

**Range in Characteristics**

*Ap horizon:*
Hue—10YR or 2.5Y
Value—5 or 6, 4 or 5 moist
Chroma—2 to 4
Texture—silt loam, loam, or silty clay loam
Reaction—slightly alkaline or moderately alkaline

*Bk horizon:*
Hue—10YR or 2.5Y
Value—5 or 6, 4 or 5 moist
Chroma—2 to 4
Texture—loam, silty clay loam, or clay loam
Reaction—slightly alkaline or moderately alkaline

## *Sundance Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Eolian material over loess
*Landform:* Plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 3 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Sundance loamy sand, 1 to 3 percent slopes, about 700 feet west and 2,580 feet south of the northeast corner of sec. 3, T. 19 S., R. 47 W.

Ap—0 to 8 inches; yellowish brown (10YR 5/4) loamy sand, dark brown (10YR 4/3) moist; single grained; loose; neutral; abrupt smooth boundary.
Bt—8 to 17 inches; dark yellowish brown (10YR 4/4) sandy loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; few faint clay films on faces of peds; neutral; abrupt smooth boundary.

2Bt—17 to 28 inches; yellowish brown (10YR 5/4) clay loam, dark brown (10YR 4/3) moist; weak medium prismatic structure parting to moderate medium subangular blocky; slightly hard, very friable, moderately sticky and moderately plastic; common fine roots; common faint clay films on faces of peds; neutral; gradual wavy boundary.
2Bk—28 to 45 inches; very pale brown (10YR 7/3) silt loam, light yellowish brown (10YR 6/4) moist; weak medium subangular blocky structure; soft, very friable, moderately sticky and moderately plastic; few fine roots; few fine masses of calcium carbonate; moderately alkaline; clear wavy boundary.
2C—45 to 84 inches; very pale brown (10YR 7/4) silt loam, light yellowish brown (10YR 6/4) moist; massive; soft, very friable, slightly sticky and slightly plastic; moderately alkaline.

**Range in Characteristics**

*Ap horizon:*
Hue—10YR
Value—4 or 5, 3 or 4 moist
Chroma—3 or 4
Texture—loamy sand

*Bt horizon:*
Hue—10YR or 2.5Y
Value—4 to 6, 3 to 5 moist
Chroma—3 or 4
Texture—sandy loam or sandy clay loam

*2Bt and 2Bk horizons:*
Hue—10YR or 2.5Y
Value—5 or 6, 4 or 5 moist
Chroma—3 or 4
Texture—clay loam or silty clay loam

*2C horizon:*
Hue—10YR or 2.5Y

## *Table Mountain Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium
*Landform:* Flood plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 2 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Table Mountain loam, 0 to 2 percent slopes, rarely flooded, in the northwest quarter of the southeast quarter of sec. 25, T. 7 S., R. 53 W.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots; neutral; abrupt wavy boundary.
Bw1—6 to 21 inches; dark grayish brown (10YR 4/2) clay loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common fine and many very fine roots; neutral; clear smooth boundary.
Bw2—21 to 29 inches; grayish brown (10YR 5/2) loam, dark grayish brown (10YR 4/2) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; slightly alkaline; clear smooth boundary.
Bw3—29 to 33 inches; grayish brown (10YR 5/2) loam, dark grayish brown (10YR 4/2) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; slightly alkaline; clear smooth boundary.
BC—33 to 38 inches; grayish brown (10YR 5/2) loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; slightly alkaline; clear smooth boundary.
C—38 to 60 inches; grayish brown (10YR 5/2) loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; slightly effervescent; slightly alkaline.

**Range in Characteristics**

*Ap horizon:*
Hue—10YR
Value—4, 3 moist
Chroma—2 or 3
Texture—loam
Reaction—neutral or slightly alkaline

*Bw horizon:*
Hue—10YR
Value—3 to 5, 3 or 4 moist
Chroma—2 or 3
Texture—loam or clay loam
Reaction—neutral or slightly alkaline

*BC horizon:*
Hue—10YR
Value—3 to 5, 3 or 4 moist
Chroma—2 or 3
Texture—loam
Reaction—slightly alkaline or moderately alkaline

*C horizon:*
Hue—10YR
Value—5 or 6, 3 or 4 moist
Chroma—2 or 3
Texture—loam
Reaction—slightly alkaline or moderately alkaline

## *Travessilla Series*

*Depth class:* Shallow
*Drainage class:* Well drained
*Parent material:* Residuum from sandstone
*Landform:* Escarpments
*Elevation:* 4,400 to 6,000 feet
*Slope:* 6 to 60 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Travessilla-Rock outcrop complex, 6 to 60 percent slopes, about 555 feet south and 950 feet west of the northeast corner of sec. 25, T. 15 S., R. 55 W.

A—0 to 3 inches; grayish brown (10YR 5/2) sandy loam, dark grayish brown (10YR 4/2) moist; weak fine granular structure; slightly hard, very friable; slightly effervescent; 10 percent fine gravel; slightly alkaline; clear wavy boundary.
Bw—3 to 13 inches; grayish brown (10YR 5/2) gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; slightly hard, very friable, moderately sticky and slightly plastic; slightly effervescent; 15 percent fine gravel; slightly alkaline; abrupt wavy boundary.
R—13 to 60 inches; grayish brown (10YR 5/2) calcareous sandstone.

**Range in Characteristics**

*A horizon:*
Hue—10YR
Value—4 or 5, 3 or 4 moist
Chroma—2 or 3
Texture—sandy loam
Reaction—slightly alkaline or moderately alkaline

*Bw horizon:*
Hue—10YR
Value—4 or 5, 3 or 4 moist
Chroma—2 or 3
Texture—gravelly sandy loam
Reaction—slightly alkaline or moderately alkaline

## *Truckton Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Eolian deposits
*Landform:* Hills
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 9 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Truckton sandy loam, 5 to 9 percent slopes, about 2,300 feet west and 550 feet north of the southeast corner of sec. 6, T. 11 S., R. 56 W.

A—0 to 6 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; neutral; clear smooth boundary.
Bt1—6 to 10 inches; brown (10YR 4/3) sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; few faint clay films on faces of peds; neutral; clear smooth boundary.
Bt2—10 to 16 inches; yellowish brown (10YR 5/4) sandy loam, dark yellowish brown (10YR 4/4) moist; weak coarse prismatic structure parting to moderate coarse subangular blocky; hard, very friable, nonsticky and nonplastic; few faint clay films on faces of peds; neutral; clear smooth boundary.
C—16 to 60 inches; light yellowish brown (10YR 6/4) loamy coarse sand, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; neutral.

**Range in Characteristics**

*A horizon:*
Hue—10YR
Value—4 or 5, 3 moist
Chroma—2

Texture—sandy loam
Reaction—neutral

*Bt horizon:*
Hue—7.5YR or 10YR
Value—4 or 5, 3 or 4 moist
Chroma—2 to 4
Texture—sandy loam
Reaction—neutral

*C horizon:*
Hue—10YR
Value—6, 4 or 5 moist
Chroma—4
Texture—sandy loam, loamy sand, or loamy coarse sand
Reaction—neutral

## *Valent Series*

*Depth class:* Very deep
*Drainage class:* Excessively drained
*Parent material:* Eolian deposits
*Landform:* Dunes
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 25 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Valent-Bijou complex, 1 to 12 percent slopes, about 1,875 feet north and 675 feet west of the southeast corner of sec. 8, T. 12 S., R. 54 W.

A—0 to 3 inches; brown (10YR 5/3) sand, dark brown (10YR 3/3) moist; weak fine granular structure; loose, nonsticky and nonplastic; many very fine and fine roots; many very fine and fine pores; neutral; clear smooth boundary.
C1—3 to 43 inches; light yellowish brown (10YR 6/4) sand, yellowish brown (10YR 5/4) moist; single grain; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; common very fine and fine pores; neutral; clear smooth boundary.
C2—43 to 60 inches; very pale brown (10YR 7/4) sand, light yellowish brown (10YR 6/4) moist; massive; hard, friable, nonsticky and nonplastic; few very fine and fine roots; common very fine and fine pores; neutral.

**Range in Characteristics**

*A horizon:*
Hue—10YR
Value—4 to 6, 3 or 4 moist
Chroma—2 or 3
Texture—sand or loamy sand
Reaction—neutral or slightly alkaline

*C horizon:*
Hue—10YR
Value—4 to 7, 4 to 6 moist
Chroma—3 to 6, 3 or 4 moist
Texture—sand or loamy sand
Reaction—neutral or slightly alkaline

## *Vona Series*

*Depth class:* Very deep
*Drainage class:* Somewhat excessively drained
*Parent material:* Eolian deposits
*Landform:* Hills
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 25 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Vona loamy sand, 1 to 9 percent slopes, about 1,160 feet south and 90 feet east of the northwest corner of sec. 8, T. 14 S., R. 55 W.

Ap—0 to 7 inches; brown (10YR 5/3) loamy sand, dark grayish brown (10YR 4/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; neutral; abrupt smooth boundary.
Bt—7 to 16 inches; brown (7.5YR 5/4) sandy loam, brown (7.5YR 4/2) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; few faint clay films on faces of peds; slightly alkaline; clear smooth boundary.
Bk1—16 to 25 inches; pale brown (10YR 6/3) sandy loam, yellowish brown (10YR 5/4) moist; weak coarse prismatic structure parting to weak coarse subangular blocky; soft, very friable, nonsticky and slightly plastic; common medium masses of calcium carbonate; violently effervescent; moderately alkaline; gradual smooth boundary.

Bk2—25 to 60 inches; very pale brown (10YR 7/3) loamy sand, light yellowish brown (10YR 6/4) moist; single grain; soft, very friable, nonsticky and nonplastic; few fine masses of calcium carbonate; strongly effervescent; moderately alkaline.

**Range in Characteristics**

• Some pedons have a Btk horizon.

*A horizon:*
Hue—10YR
Value—4 or 5, 3 or 4 moist
Chroma—3 or 4, 2 or 3 moist
Texture—loamy sand or sandy loam
Reaction—neutral

*Bt horizon:*
Hue—7.5YR or 10YR
Value—4 or 5, 4 moist
Chroma—3 or 4, 2 to 4 moist
Texture—sandy loam
Reaction—slightly alkaline

*Bk horizon:*
Hue—10YR
Value—6 or 7, 5 moist
Chroma—3 or 4
Texture—sandy loam or loam
Reaction—moderately alkaline

*Lower Bk horizon:*
Hue—10YR
Value—5 to 7, 4 to 6 moist
Chroma—3 or 4
Texture—loamy sand, sandy loam, or loam
Reaction—moderately alkaline or strongly alkaline

## *Vonid Series*

*Depth class:* Very deep
*Drainage class:* Somewhat excessively drained
*Parent material:* Eolian deposits
*Landform:* Hills and interdunes
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 25 percent
*MLRA:* 69
*Mean annual precipitation:* 11 to 14 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Vonid loamy sand, 1 to 9 percent slopes, about 1,350 feet east and 50 feet north of the southwest corner of sec. 16, T. 17 S., R. 59 W.

A—0 to 6 inches; brown (10YR 5/3) loamy sand, dark brown (10YR 3/3) moist; weak coarse granular structure; slightly hard, very friable, nonsticky and nonplastic; many fine through coarse roots; neutral; gradual smooth boundary.

Bt1—6 to 14 inches; dark yellowish brown (10YR 4/4) sandy loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and nonplastic; many fine through coarse roots; few faint clay films; neutral; clear smooth boundary.

Bt2—14 to 23 inches; yellowish brown (10YR 5/4) sandy loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and nonplastic; very few fine roots; few faint clay films; neutral; clear smooth boundary.

Bt3—23 to 34 inches; light yellowish brown (10YR 6/4) sandy loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; very few fine roots; few faint clay films; neutral; clear smooth boundary.

Bk1—34 to 52 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 5/3) moist; weak fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; very few fine roots; many medium masses of calcium carbonate; violently effervescent; moderately alkaline; clear smooth boundary.

Bk2—52 to 60 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 5/3) moist; massive; hard, friable, nonsticky and nonplastic; few fine masses of calcium carbonate; strongly effervescent; moderately alkaline.

**Range in Characteristics**

*A horizon:*
Hue—7.5YR or 10YR
Value—4 or 5, 3 or 4 moist
Chroma—2 to 4
Texture—sandy loam or loamy sand
Reaction—neutral or slightly alkaline

*Bt horizon:*
Hue—7.5YR or 10YR
Value—4 to 6, 3 to 5 moist
Chroma—3 or 4
Texture—sandy loam
Calcium carbonate equivalent—0 to 5 percent
Reaction—neutral or slightly alkaline

*Bk horizon:*
Hue—7.5YR or 10YR
Value—5 or 6, 4 or 5 moist

Chroma—3 to 6
Texture—sandy loam
Calcium carbonate equivalent—5 to 15 percent
Reaction—slightly alkaline or moderately alkaline

*Lower Bk horizon:*
Hue—7.5YR or 10YR
Value—6 or 7, 5 moist
Chroma—3 to 6
Texture—sandy loam or loamy sand
Calcium carbonate equivalent—5 to 15 percent
Reaction—slightly alkaline to strongly alkaline

## *Wages Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Alluvium and/or eolian deposits
*Landform:* Hills
*Elevation:* 4,400 to 6,000 feet
*Slope:* 1 to 15 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

### Typical Pedon

Wages-Karvel complex, 6 to 15 percent slopes, about 1,755 feet south and 1,320 feet east of the northwest corner of sec. 5, T. 8 S., R. 56 W.

A—0 to 4 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to moderate fine granular; slightly hard, friable, slightly sticky; many fine and very fine roots; 2 percent fine gravel; neutral; clear smooth boundary.

Bt—4 to 10 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; slightly hard, firm, moderately sticky; many fine and very fine roots; few faint clay films on faces of peds; 1 percent fine gravel; neutral; clear smooth boundary.

Btk—10 to 13 inches; light brownish gray (10YR 6/2) clay loam, brown (10YR 5/3) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; slightly hard, firm, moderately sticky; many fine and very fine roots; few faint clay films on faces of peds; few fine masses of calcium carbonate; strongly effervescent; 1 percent fine gravel; moderately alkaline; clear smooth boundary.

Bk—13 to 35 inches; light gray (10YR 7/2) loam, brown (10YR 5/3) moist; weak medium prismatic structure parting to weak fine and medium subangular blocky; slightly hard, firm, moderately sticky; common very fine roots; few fine masses of calcium carbonate; violently effervescent; 1 percent fine gravel; moderately alkaline; clear smooth boundary.

C—35 to 60 inches; very pale brown (10YR 7/3) loam, yellowish brown (10YR 5/4) moist; weak coarse prismatic structure parting to weak medium subangular blocky; soft, friable, slightly sticky; few very fine roots; strongly effervescent; 1 percent fine gravel; slightly alkaline.

### Range in Characteristics

*A horizon:*
Hue—10YR
Value—4 or 5, 3 moist
Chroma—2 or 3
Texture—loam
Reaction—neutral or slightly alkaline

*Bt horizon:*
Hue—10YR
Value—4 or 5, 3 or 4 moist
Chroma—2 to 4, 2 or 3 moist
Texture—loam, clay loam, or sandy clay loam
Reaction—neutral or slightly alkaline

*Btk horizon:*
Hue—10YR
Value—5 to 7, 4 to 6 moist
Chroma—2 or 3
Texture—clay loam
Reaction—moderately alkaline

*Bk horizon:*
Hue—10YR
Value—5 to 7, 4 or 5 moist
Chroma—2 to 4, 2 or 3 moist
Texture—loam
Reaction—moderately alkaline

*C horizon:*
Hue—7.5YR or 10YR
Value—6 or 7, 5 or 6 moist
Chroma—2 or 3, 3 or 4 moist
Texture—loam, clay loam, or sandy clay loam
Reaction—slightly alkaline or moderately alkaline

## *Weld Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Loess
*Landform:* Hills and plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 5 percent
*MLRA:* 67 and 69
*Mean annual precipitation:* 11 to 16 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Weld silt loam, 0 to 2 percent slopes, about 270 feet north and 2,065 feet east of the southwest corner of sec. 3, T. 9 S., R. 54 W.

A—0 to 4 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure parting to moderate fine granular; slightly hard, friable, moderately sticky and moderately plastic; many fine and very fine roots; neutral; abrupt smooth boundary.

Bt1—4 to 10 inches; grayish brown (10YR 5/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium prismatic structure parting to moderate fine subangular blocky; hard, firm, moderately sticky and moderately plastic; many fine and very fine roots; common faint clay films on faces of peds; neutral; clear smooth boundary.

Bt2—10 to 19 inches; grayish brown (10YR 5/2) silty clay, very dark grayish brown (10YR 3/2) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; very hard, very firm, moderately sticky and moderately plastic; common fine roots; common faint clay films on faces of peds; neutral; clear wavy boundary.

Btk—19 to 33 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 5/3) moist; weak medium prismatic structure parting to moderate medium subangular blocky; very hard, firm, moderately sticky and moderately plastic; common fine roots; common faint clay films on faces of peds; common fine and medium masses of calcium carbonate; strongly effervescent; slightly alkaline; clear wavy boundary.

Bk1—33 to 44 inches; very pale brown (10YR 7/3) silty clay loam, brown (10YR 5/3) moist; weak coarse prismatic structure parting to moderate medium and coarse subangular blocky; slightly hard, friable, moderately sticky and moderately plastic; common fine masses of calcium carbonate; violently effervescent; moderately alkaline; gradual wavy boundary.

Bk2—44 to 60 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; massive; slightly hard, friable, moderately sticky and slightly plastic; common fine masses of calcium carbonate; violently effervescent; moderately alkaline.

**Range in Characteristics**

*A horizon:*
Hue—10YR
Value—4 or 5, 2 or 3 moist
Chroma—2 or 3
Texture—silt loam
Reaction—neutral or slightly alkaline

*Bt horizon:*
Hue—10YR
Value—4 to 6, 3 or 4 moist
Chroma—2 or 3
Texture—silty clay loam or silty clay
Reaction—neutral or slightly alkaline

*Btk horizon:*
Hue—10YR
Value—5 or 6
Chroma—3
Texture—silty clay loam
Reaction—slightly alkaline or moderately alkaline

*Bk horizon:*
Hue—10YR
Value—5 to 7, 5 or 6 moist
Chroma—2 or 3
Texture—silty clay loam or silt loam
Reaction—moderately alkaline

*Lower Bk horizon:*
Hue—10YR
Value—6 to 8, 5 or 6 moist
Chroma—2 to 4, 3 moist
Texture—silt loam
Reaction—moderately alkaline or strongly alkaline

## *Wiley Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Loess
*Landform:* Hills and plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 12 percent
*MLRA:* 67
*Mean annual precipitation:* 14 to 16 inches

*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Wiley silt loam, 3 to 12 percent slopes, about 2,050 feet east and 150 feet south of the northwest corner of sec. 22, T. 7 S., R. 56 W.

Ap—0 to 4 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; slightly effervescent; moderately alkaline; clear smooth boundary.
Bt—4 to 10 inches; brown (10YR 5/3) silty clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few faint clay films on faces of peds; slightly effervescent; moderately alkaline; clear smooth boundary.
Btk—10 to 18 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few faint clay films on faces of peds; few medium masses of calcium carbonate; violently effervescent; moderately alkaline; clear smooth boundary.
Bk—18 to 23 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common medium masses of calcium carbonate; violently effervescent; strongly alkaline; clear smooth boundary.
C—23 to 60 inches; light yellowish brown (10YR 6/4) silt loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; violently effervescent; strongly alkaline.

**Range in Characteristics**

*A horizon:*
Hue—10YR
Value—4 or 5, 3 or 4 moist
Chroma—2 or 3
Texture—silt loam
Reaction—moderately alkaline

*Bt horizon:*
Hue—10YR
Value—5 or 6, 4 or 5 moist
Chroma—3
Texture—silt loam or silty clay loam
Reaction—moderately alkaline

*Btk horizon:*
Hue—10YR
Value—6, 4 or 5 moist
Chroma—3
Texture—silt loam or silty clay loam
Reaction—moderately alkaline

*Bk horizon:*
Hue—10YR
Value—5 or 6
Chroma—3
Texture—silt loam or silty clay loam
Reaction—moderately alkaline or strongly alkaline

*C horizon:*
Hue—10YR
Value—6 or 7, 5 or 6 moist
Chroma—3 or 4, 2 or 3 moist
Texture—silt loam
Reaction—moderately alkaline or strongly alkaline

## *Wilid Series*

*Depth class:* Very deep
*Drainage class:* Well drained
*Parent material:* Loess
*Landform:* Plains
*Elevation:* 4,400 to 6,000 feet
*Slope:* 0 to 3 percent
*MLRA:* 69
*Mean annual precipitation:* 11 to 14 inches
*Mean annual air temperature:* 47 to 51 degrees F
*Mean annual soil temperature:* 49 to 53 degrees F
*Frost-free period:* 135 to 155 days

**Typical Pedon**

Wilid silt loam, 0 to 3 percent slopes, about 156 feet west and 520 feet south of the northeast corner of sec. 27, T. 16 S., R. 53 W.

Ap—0 to 3 inches; brown (10YR 5/3) silt loam, dark grayish brown (10YR 4/2) moist; moderate fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; few fine roots; strongly effervescent; moderately alkaline; abrupt smooth boundary.
Btk1—3 to 8 inches; light yellowish brown (10YR 6/4) silty clay loam, yellowish brown (10YR 5/4) moist; weak medium prismatic structure parting to moderate medium subangular blocky; hard, firm, moderately sticky and moderately plastic; few fine roots; few very fine pores; few faint clay films on faces of peds; many fine masses of calcium carbonate; strongly effervescent; moderately alkaline; clear smooth boundary.

Btk2—8 to 14 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 5/3) moist; weak medium prismatic structure parting to moderate fine subangular blocky; slightly hard, friable, moderately sticky and moderately plastic; few very fine roots; few very fine pores; few faint clay films on faces of peds; common fine masses of calcium carbonate; violently effervescent; moderately alkaline; clear wavy boundary.

Bk1—14 to 21 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine pores; common fine masses of calcium carbonate; violently effervescent; strongly alkaline; gradual wavy boundary.

Bk2—21 to 35 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots; common very fine pores; common fine masses of calcium carbonate; violently effervescent; strongly alkaline; gradual wavy boundary.

Bk3—35 to 60 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots; common very fine pores; common fine masses of calcium carbonate; strongly effervescent; strongly alkaline.

**Range in Characteristics**

*A horizon:*
- Hue—10YR
- Value—4 to 6, 3 or 4 moist
- Chroma—2 or 3
- Texture—silt loam
- Reaction—neutral to moderately alkaline

*Btk horizon:*
- Hue—10YR
- Value—5 or 6, 4 or 5 moist
- Chroma—3 or 4
- Texture—silt loam or silty clay loam
- Calcium carbonate equivalent—5 to 15 percent
- Reaction—moderately alkaline or strongly alkaline

*Bk horizon:*
- Hue—10YR
- Value—6 or 7, 5 or 6 moist
- Chroma—2 to 4
- Texture—silt loam or silty clay loam
- Calcium carbonate equivalent—5 to 15 percent
- Reaction—moderately alkaline or strongly alkaline

*Lower Bk horizon:*
- Hue—10YR
- Value—6 to 8, 5 or 6 moist
- Chroma—2 to 4
- Texture—silt loam, silty clay loam, or loam
- Calcium carbonate equivalent—5 to 15 percent
- Reaction—moderately alkaline or strongly alkaline

# Formation of the Soils

In this section, the soil-forming processes and the factors of soil formation are explained and discussed as they relate to the soils in Lincoln County. The factors of soil formation, or the soil environment, are external factors. The soil-forming processes, or pedogenic processes, are internal processes. The soil characteristics are determined by the interaction of the four major soil-forming processes and the five major factors of soil formation.

## Soil-Forming Processes

A soil-forming process is an internal sequence of events that intimately affects the soil in which it operates (Buol and others, 1980). The characteristics of the soil are determined by the interaction of four processes of soil formation: (1) additions; (2) losses; (3) translocations; and (4) transformations. A given process may tend to maintain the soil in its current condition or it may tend to change the soil (Buol and others, 1980).

The most obvious addition is organic matter. As soon as plant life begins to grow, organic matter begins to accumulate. Most organic matter additions to the surface increase the cation exchange capacity and nutrients. Other additions may come with rainfall or deposition by wind, such as windblown or eolian material.

Most losses occur by leaching. Water moving through the soil dissolves certain minerals and transports them into deeper layers. Some materials are also lost from the soil as a gas. Solid mineral and organic particles are lost by erosion. Such losses can be serious because the material lost is usually the most productive part of the soil profile.

Translocation means movement from one place to another. Leaching often is incomplete in low rainfall areas. Water starts moving down through the soil, dissolving soluble minerals as it goes. There isn't enough water, however, to move all the way through the soil. When the water stops moving, then evaporates, salts are left behind. Soil layers that have calcium carbonate form this way.

Transformations are changes that take place in the soil. Microorganisms that live in the soil feed on fresh organic matter and change it into humus. Chemical weathering changes parent material. Some minerals are destroyed completely. Others are changed into new minerals. Other transformations can change the form of certain materials. Iron is present in the soil in different forms depending on the amount of water in the soil.

## Factors of Soil Formation

A factor of soil formation is an external agent, force, condition, or relationship, or combination of these, which influence, has influenced, or may influence the parent material of the soil, with the potential of changing it (Buol and others, 1980). The characteristics of the soil are determined by the interaction of five factors of soil formation: (1) the physical and mineralogical composition of the parent material; (2) the climate under which the parent material has accumulated and existed since accumulation; (3) the living organisms on and in the soil; (4) the relief; and (5) the length of time these forces have acted on the parent material. These factors are interdependent (Buol and others, 1980). Under different conditions, some factors are more effective than others. Different soils are formed where any one factor varies widely from place to place.

### Parent Material

Parent material is the unconsolidated material from which the soil develops. The varying physical and chemical properties of the different types of parent material result in the formation of different soils. Texture, color, consistence, and permeability are some of the soil properties that are influenced by parent material. There are three major parent materials in Lincoln County: (1) eolian material; (2) alluvium; and (3) residuum.

There are three major types of eolian parent material in Lincoln County. They are loess, loamy eolian material, and sandy eolian material. Loess is windblown silt, clay, and very fine sand. It was deposited by strong winds during late Pleistocene time. Soils formed in loess are high in silt and high in

nutrient reserve (Buol and others, 1980). Soils that formed in eolian materials have few rock fragments. Weld and Colby are examples of soils formed in loess. Loamy eolian material consists mostly of windblown sandy loam. Vona is an example of a soil formed in loamy eolian materials. Sandy eolian material consists of windblown loamy sand and sand. Sandy eolian material blew out of the Big Sandy Creek flood plain into dune areas. Valent is an example of a soil formed in sandy eolian material.

Alluvium is material deposited by water. Recent alluvium is commonly stratified sediments deposited on flood plains and drainageways. Soils formed in recent alluvium are weakly developed. Glenburg and Haverson are examples of soils that formed in recent alluvium. Some soils in Lincoln County are formed in alluvium that was originally deposited by streams flowing from the Rocky Mountains about 15 million years ago. Karval is an example of a soil that formed in old alluvium.

Some soils in Lincoln County have a mixed alluvium and eolian parent material. Fort Collins and Olney are examples of soils that have developed in loamy alluvium, modified by a thin mantle of loamy eolian deposits.

Residuum is weathered bedrock material that disintegrated in place. In this survey area, residuum is material weathered from sandstone or gray, clayey shale. Midway is an example of a soil formed in residuum.

## Climate

Climate influences the kind of vegetation that grows on soils, the level of biological activity in soils, and the physical and chemical weathering of parent material. Precipitation and temperature are important factors of soil formation. Wind velocity and humidity also have an influence.

The climate in Lincoln County is semiarid. It is characterized by extremes in temperature and precipitation. Winters are cold and dry and summers are hot. The northern part of the county generally receives about 14 to 16 inches of precipitation annually. The southern part of the county generally receives about 11 to 14 inches of precipitation annually. In winter the average temperature is 30 degrees F and in summer the average temperature is 73 degrees F.

The climate in Lincoln County is conducive to the growth of short prairie grasses. Materials such as calcium carbonates and clay move downward, but are not leached out of the soil. Keith is an example of soil that contains calcium carbonate and clay accumulation in the subsoil. High pH also is common in soils formed in this climate. Soils formed under high temperatures often have high clay content and soil colors tend to become less gray and more reddish.

## Living Organisms

Living organisms affect soil development by supplying upper layers with organic matter, recycling nutrients, and helping to prevent erosion. All of the soils of Lincoln County formed under native prairie grass. In native grassland the upper few inches of soil material contains a large number of fine roots. Decomposed organic matter has darkened the upper part of the soil and has influenced the development of soil structure. Fungi, bacteria, insects, earthworms, and burrowing animals eat and break down organic matter releasing plant nutrients. Some change certain elements, such as sulfur and nitrogen, into usable forms for plants. Earthworms, insects, and burrowing animals mix soils and commonly affect soil structure by making the soil more porous.

## Relief

Relief is described as elevations or inequalities of the land surface considered collectively (Buol and others, 1980). It affects runoff, erosion, and drainage. If the other factors of soil formation are constant, an increase in slope causes increased runoff, increased erosion, and slower profile development. The degree to which rainfall enters the soil or runs off is regulated to some extent by relief. Midway is an example of a soil that commonly has high runoff, increased erosion, and weak development. Areas that have less slope commonly have less potential for runoff and erosion, and the soils tend to have pronounced pedogenic development. Platner is an example of a soil that has strong development. Apishapa formed in a depression and is an example of a soil that receives runoff water from surrounding areas and has deposition, instead of erosion, because of the relief.

## Time

Time zero for soils is described as the point at which a pedologically catastrophic event is completed, initiating a new cycle of soil development (Buol and others, 1980). All the other factors of soil formation—parent material, climate, living organisms, and topography—need time to influence the properties

of developing soils. Soil development, or aging, is reflected by such characteristics as degree of structure, evidence of clay movement, depth to calcium carbonate accumulations, and thickness of the solum.

Time is required for horizon formation. The longer a soil surface has been exposed to soil-forming agents like rain and growing plants, the greater the development of the soil profile. Soils in recent alluvial or windblown materials, or soils on steep slopes where erosion has been active, may show very little horizon development. Glenberg is an example of a soil that formed in recent alluvium and has weak development. Soils on older, stable surfaces generally have well defined horizons because the rate of soil formation has exceeded the rate of geologic erosion or deposition. Weld is an example of a soil that formed on a stable landscape and has strong development. Soils become more leached, more acid, and more clayey with time.

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# Glossary

**AC soil.** A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

**Aeration, soil.** The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

**Aggregate, soil.** Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

**Alkali (sodic) soil.** A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

**Alluvial fan.** The fanlike deposit of a stream where it issues from a gorge upon a plain or of a tributary stream near or at its junction with its main stream.

**Alluvium.** Material, such as sand, silt, or clay, deposited on land by streams.

**Alpha,alpha-dipyridyl.** A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

**Animal unit month (AUM).** The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

**Area reclaim** (in tables). An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

**Argillic horizon.** A subsoil horizon characterized by an accumulation of illuvial clay.

**Aspect.** The direction in which a slope faces.

**Association, soil.** A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

**Available water capacity (available moisture capacity).** The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

| | |
|---|---|
| Very low | 0 to 3 |
| Low | 3 to 6 |
| Moderate | 6 to 9 |
| High | 9 to 12 |
| Very high | more than 12 |

**Backslope.** The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

**Base saturation.** The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

**Bedrock.** The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

**Bedrock-controlled topography.** A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

**Bisequum.** Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

**Blowout.** A shallow depression from which all or most of the soil material has been removed by the wind. A blowout has a flat or irregular floor formed by a resistant layer or by an accumulation of pebbles or cobbles. In some blowouts the water table is exposed.

**Bottom land.** The normal flood plain of a stream, subject to flooding.

**Boulders.** Rock fragments larger than 2 feet (60 centimeters) in diameter.

**Breaks.** The steep and very steep broken land at the border of an upland summit that is dissected by ravines.

**Brush management.** Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

**Calcareous soil.** A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

**Capillary water.** Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

**Catena.** A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

**Cation.** An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

**Cation-exchange capacity.** The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

**Chemical treatment.** Control of unwanted vegetation through the use of chemicals.

**Chiseling.** Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

**Clay.** As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

**Clay depletions.** Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

**Clay film.** A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

**Claypan.** A slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.

**Climax plant community.** The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

**Coarse textured soil.** Sand or loamy sand.

**Cobble (or cobblestone).** A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

**Cobbly soil material.** Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

**Colluvium.** Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

**Complex slope.** Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

**Complex, soil.** A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

**Concretions.** Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

**Conservation cropping system.** Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

**Conservation tillage.** A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

**Consistence, soil.** Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

**Contour stripcropping.** Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

**Control section.** The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

**Corrosion.** Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

**Cover crop.** A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

**Cropping system.** Growing crops according to a planned system of rotation and management practices.

**Crop residue management.** Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

**Cutbanks cave** (in tables). The walls of excavations tend to cave in or slough.

**Decreasers.** The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

**Deferred grazing.** Postponing grazing or resting grazing land for a prescribed period.

**Dense layer** (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

**Depth, soil.** Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

**Depth to rock** (in tables). Bedrock is too near the surface for the specified use.

**Diversion (or diversion terrace).** A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

**Drainage class** (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the "Soil Survey Manual."

**Drainage, surface.** Runoff, or surface flow of water, from an area.

**Ecological site.** An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

**Eluviation.** The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

**Endosaturation.** A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

**Eolian soil material.** Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

**Ephemeral stream.** A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

**Episaturation.** A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

**Erosion.** The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.
*Erosion* (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

*Erosion* (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

**Escarpment.** A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

**Excess sodium** (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

**Fallow.** Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

**Fast intake** (in tables). The rapid movement of water into the soil.

**Fertility, soil.** The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

**Fibric soil material (peat).** The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

**Field moisture capacity.** The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

**Fine textured soil.** Sandy clay, silty clay, or clay.

**Flood plain.** A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

**Forb.** Any herbaceous plant not a grass or a sedge.

**Forest cover.** All trees and other woody plants (underbrush) covering the ground in a forest.

**Frost action** (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings and other structures, and plant roots.

**Genesis, soil.** The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

**Gleyed soil.** Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

**Grassed waterway.** A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

**Gravel.** Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

**Gravelly soil material.** Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

**Green manure crop** (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

**Ground water.** Water filling all the unblocked pores of the material below the water table.

**Gully.** A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

**Hemic soil material (mucky peat).** Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

**High-residue crops.** Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

**Hill.** A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

**Horizon, soil.** A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

*O horizon.*—An organic layer of fresh and decaying plant residue.

*A horizon.*—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

*E horizon.*—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

*B horizon.*—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

*C horizon.*—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

*Cr horizon.*—Soft, consolidated bedrock beneath the soil.

*R layer.*—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

**Humus.** The well decomposed, more or less stable part of the organic matter in mineral soils.

**Hydrologic soil groups.** Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

**Illuviation.** The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

**Impervious soil.** A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

**Increasers.** Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

**Infiltration.** The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

**Infiltration capacity.** The maximum rate at which water can infiltrate into a soil under a given set of conditions.

**Infiltration rate.** The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

**Intermittent stream.** A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

**Invaders.** On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

**Iron depletions.** Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

**$K_{sat}$.** Saturated hydraulic conductivity. (See Permeability.)

**Large stones** (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

**Leaching.** The removal of soluble material from soil or other material by percolating water.

**Linear extensibility.** Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

**Liquid limit.** The moisture content at which the soil passes from a plastic to a liquid state.

**Loam.** Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

**Loess.** Fine grained material, dominantly of silt-sized particles, deposited by wind.

**Low strength.** The soil is not strong enough to support loads.

**Masses.** Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

**Mechanical treatment.** Use of mechanical equipment for seeding, brush management, and other management practices.

**Medium textured soil.** Very fine sandy loam, loam, silt loam, or silt.

**Mineral soil.** Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

**Minimum tillage.** Only the tillage essential to crop production and prevention of soil damage.

**Miscellaneous area.** An area that has little or no natural soil and supports little or no vegetation.

**Moderately coarse textured soil.** Coarse sandy loam, sandy loam, or fine sandy loam.

**Moderately fine textured soil.** Clay loam, sandy clay loam, or silty clay loam.

**Mollic epipedon.** A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

**Morphology, soil.** The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

**Mottling, soil.** Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

**Mountain.** A natural elevation of the land surface, rising more than 1,000 feet above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range.

**Munsell notation.** A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

**Natric horizon.** A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

**Neutral soil.** A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

**Nodules.** Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

**Nose slope.** A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent.

**Nutrient, plant.** Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

**Organic matter.** Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

| | |
|---|---|
| Very low | less than 0.5 percent |
| Low | 0.5 to 1.0 percent |
| Moderately low | 1.0 to 2.0 percent |
| Moderate | 2.0 to 4.0 percent |
| High | 4.0 to 8.0 percent |
| Very high | more than 8.0 percent |

**Pan.** A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

**Parent material.** The unconsolidated organic and mineral material in which soil forms.

**Ped.** An individual natural soil aggregate, such as a granule, a prism, or a block.

**Pedon.** The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

**Percolation.** The movement of water through the soil.

**Percs slowly** (in tables). The slow movement of water through the soil adversely affects the specified use.

**Permeability.** The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

| | |
|---|---|
| Impermeable | less than 0.0015 inch |
| Very slow | 0.0015 to 0.06 inch |
| Slow | 0.06 to 0.2 inch |
| Moderately slow | 0.2 to 0.6 inch |
| Moderate | 0.6 inch to 2.0 inches |
| Moderately rapid | 2.0 to 6.0 inches |
| Rapid | 6.0 to 20 inches |
| Very rapid | more than 20 inches |

**Phase, soil.** A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

**pH value.** A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

**Piping** (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

**Plasticity index.** The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

**Plastic limit.** The moisture content at which a soil changes from semisolid to plastic.

**Playa.** The generally dry and nearly level lake plain that occupies the lowest parts of closed depressional areas, such as those on intermontane basin floors. Temporary flooding occurs primarily in response to precipitation and runoff.

**Ponding.** Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

**Poorly graded.** Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

**Potential native plant community.** See Climax plant community.

**Potential rooting depth (effective rooting depth).** Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

**Prescribed burning.** Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

**Productivity, soil.** The capability of a soil for producing a specified plant or sequence of plants under specific management.

**Profile, soil.** A vertical section of the soil extending through all its horizons and into the parent material.

**Proper grazing use.** Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

**Rangeland.** Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

**Reaction, soil.** A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

| | |
|---|---|
| Ultra acid | less than 3.5 |
| Extremely acid | 3.5 to 4.4 |
| Very strongly acid | 4.5 to 5.0 |
| Strongly acid | 5.1 to 5.5 |
| Moderately acid | 5.6 to 6.0 |
| Slightly acid | 6.1 to 6.5 |
| Neutral | 6.6 to 7.3 |
| Slightly alkaline | 7.4 to 7.8 |
| Moderately alkaline | 7.9 to 8.4 |
| Strongly alkaline | 8.5 to 9.0 |
| Very strongly alkaline | 9.1 and higher |

**Redoximorphic concentrations.** Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

**Redoximorphic depletions.** Low-chroma zones from which iron and manganese oxide or a combination

of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

**Redoximorphic features.** Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

**Reduced matrix.** A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

**Relief.** The elevations or inequalities of a land surface, considered collectively.

**Residuum (residual soil material).** Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

**Rill.** A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

**Rock fragments.** Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

**Root zone.** The part of the soil that can be penetrated by plant roots.

**Runoff.** The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

**Saline soil.** A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

**Sand.** As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

**Sandstone.** Sedimentary rock containing dominantly sand-sized particles.

**Sapric soil material (muck).** The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

**Saturation.** Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water flows from the soil matrix into an unlined auger hole.

**Sedimentary rock.** Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

**Seepage** (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

**Sequum.** A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

**Series, soil.** A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

**Shale.** Sedimentary rock formed by the hardening of a clay deposit.

**Sheet erosion.** The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

**Shoulder.** The position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

**Shrink-swell** (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

**Side slope.** A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

**Silt.** As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

**Similar soils.** Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

**Slick spot.** A small area of soil having a puddled, crusted, or smooth surface and an excess of exchangeable sodium. The soil generally is silty or clayey, is slippery when wet, and is low in productivity.

**Slope.** The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

**Slow intake** (in tables). The slow movement of water into the soil.

**Slow refill** (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

**Sodic (alkali) soil.** A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

**Sodicity.** The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of $Na^{+}$ to $Ca^{++} + Mg^{++}$. The degrees of sodicity and their respective ratios are:

| | |
|---|---|
| Slight | less than 13:1 |
| Moderate | 13-30:1 |
| Strong | more than 30:1 |

**Sodium adsorption ratio (SAR).** A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

**Soft bedrock.** Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

**Soil.** A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

**Soil separates.** Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

| | |
|---|---|
| Very coarse sand | 2.0 to 1.0 |
| Coarse sand | 1.0 to 0.5 |
| Medium sand | 0.5 to 0.25 |
| Fine sand | 0.25 to 0.10 |
| Very fine sand | 0.10 to 0.05 |
| Silt | 0.05 to 0.002 |
| Clay | less than 0.002 |

**Solum.** The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

**Stripcropping.** Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

**Structure, soil.** The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

**Stubble mulch.** Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

**Subsoil.** Technically, the B horizon; roughly, the part of the solum below plow depth.

**Substratum.** The part of the soil below the solum.

**Subsurface layer.** Any surface soil horizon (A, E, AB, or EB) below the surface layer.

**Summer fallow.** The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

**Summit.** The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

**Surface layer.** The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."

**Surface soil.** The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

**Taxadjuncts.** Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and

behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

**Terrace.** An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

**Terrace** (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

**Texture, soil.** The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

**Thin layer** (in tables). Otherwise suitable soil material that is too thin for the specified use.

**Tilth, soil.** The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

**Toeslope.** The position that forms the gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

**Too arid** (in tables). The soil is dry most of the time, and vegetation is difficult to establish.

**Topsoil.** The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

**Trace elements.** Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

**Upland.** Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

**Weathering.** All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

**Well graded.** Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

**Wilting point (or permanent wilting point).** The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

# Tables

**Table 1.--Temperature and Precipitation**

**(Recorded in the period 1961-90 at Genoa, Colorado)**

| Month | Temperature | | | Precipitation | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | 30 percent chance will have | | Average number of days with 0.10 inch or more | Average total snowfall |
| | Average daily maximum | Average daily mimimum | Average | Average | Less than-- | More than-- | | |
| | °F | °F | °F | In | In | In | | In |
| January | 35.2 | 10.1 | 22.6 | 0.28 | 0.14 | 0.35 | 1 | 3.6 |
| February | 41.5 | 15.6 | 28.6 | 0.30 | 0.11 | 0.37 | 0 | 2.6 |
| March | 44.8 | 16.3 | 30.5 | 0.90 | 0.47 | 1.11 | 2 | 7.1 |
| April | 58.0 | 26.7 | 42.3 | 1.13 | 0.56 | 1.38 | 3 | 3.7 |
| May | 69.0 | 36.9 | 52.9 | 2.81 | 1.73 | 3.40 | 5 | 1.2 |
| June | 84.5 | 49.7 | 67.1 | 2.34 | 1.49 | 2.82 | 5 | 0.0 |
| July | 85.6 | 52.6 | 69.1 | 2.66 | 1.85 | 3.17 | 6 | 0.0 |
| August | 84.6 | 53.7 | 69.2 | 2.54 | 1.78 | 3.02 | 5 | 0.0 |
| September | 70.8 | 42.0 | 56.4 | 1.15 | 0.62 | 1.40 | 3 | 0.8 |
| October | 58.6 | 31.8 | 45.2 | 0.54 | 0.24 | 0.66 | 1 | 2.8 |
| November | 44.2 | 22.0 | 33.1 | 0.43 | 0.22 | 0.54 | 1 | 4.3 |
| December | 39.7 | 14.7 | 27.2 | 0.29 | 0.09 | 0.37 | 1 | 3.6 |
| Annual---- | --- | --- | --- | --- | 13.39 | 16.58 | --- | --- |
| Average- | 59.7 | 31.0 | 45.4 | --- | --- | --- | --- | --- |
| Total--- | --- | --- | --- | 15.38 | --- | --- | 33 | 29.6 |

**Table 2.--Temperature and Precipitation**

**(Recorded in the period 1961-90 at Karval, Colorado)**

| Month | Temperature | | | Precipitation | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | 30 percent chance will have | | Average number of days with 0.10 inch or more | Average total snowfall |
| | Average daily maximum | Average daily minimum | Average | Average | Less than-- | More than-- | | |
| | °F | °F | °F | In | In | In | | In |
| January | 43.4 | 15.9 | 29.7 | 0.34 | 0.07 | 0.42 | 1 | 3.7 |
| February | 44.6 | 18.4 | 31.5 | 0.28 | 0.04 | 0.35 | 1 | 2.3 |
| March | 53.3 | 25.5 | 39.4 | 0.81 | 0.32 | 1.01 | 2 | 3.5 |
| April | 64.0 | 34.2 | 49.1 | 0.90 | 0.34 | 1.12 | 2 | 1.4 |
| May | 71.1 | 43.5 | 57.3 | 2.30 | 1.16 | 2.85 | 4 | 0.7 |
| June | 81.8 | 53.1 | 67.5 | 1.60 | 1.03 | 1.96 | 3 | 0.0 |
| July | 88.5 | 58.2 | 73.3 | 2.58 | 1.56 | 3.13 | 4 | 0.0 |
| August | 86.4 | 57.4 | 71.9 | 1.78 | 0.81 | 2.17 | 3 | 0.0 |
| September | 78.3 | 48.3 | 63.3 | 1.00 | 0.53 | 1.23 | 2 | 0.3 |
| October | 66.5 | 35.6 | 51.1 | 0.65 | 0.23 | 0.83 | 1 | 0.8 |
| November | 53.6 | 24.9 | 39.2 | 0.50 | 0.11 | 0.61 | 1 | 2.9 |
| December | 42.3 | 15.4 | 28.9 | 0.34 | 0.08 | 0.44 | 0 | 3.4 |
| Annual---- | --- | --- | --- | --- | 10.79 | 14.77 | --- | --- |
| Average- | 64.5 | 35.9 | 50.2 | --- | --- | --- | --- | --- |
| Total--- | --- | --- | --- | 13.07 | --- | --- | 24 | 18.9 |

**Table 3.--Growing Season**

**(Recorded in the period 1948-99)**

| Probability | Temperature | | |
|---|---|---|---|
| | 24 °F or higher | 28 °F or higher | 32 °F or higher |
| | Beginning and ending dates<br>Growing season length | | |
| 50 percent * | 4/12 to 10/23<br>194 days | 4/30 to 10/10<br>163 days | 5/5 to 10/6<br>153 days |
| 70 percent * | 4/10 to 10/25<br>197 days | 4/26 to 10/14<br>171 days | 5/2 to 10/9<br>160 days |

* Percent chance of the growing season occurring between the beginning and ending dates.

Table 4.--Acreage and Proportionate Extent of the Soils

| Map symbol | Soil name | Acres | Percent |
|---|---|---|---|
| 101 | Apishapa clay loam, 0 to 3 percent slopes, rarely ponded | 4,348 | 0.3 |
| 102 | Arvada clay loam, 0 to 5 percent slopes | 59,189 | 3.6 |
| 103 | Ascalon sandy loam, 1 to 3 percent slopes | 15,313 | 0.9 |
| 104 | Ascalon sandy loam, 3 to 5 percent slopes | 13,248 | 0.8 |
| 105 | Ascalon sandy loam, 5 to 9 percent slopes | 12,899 | 0.8 |
| 106 | Ascalon sandy loam, dry, 1 to 3 percent slopes | 24,800 | 1.5 |
| 107 | Ascalon sandy loam, dry, 3 to 5 percent slopes | 2,619 | 0.2 |
| 108 | Ascalon sandy loam, dry, 5 to 9 percent slopes | 1,251 | * |
| 109 | Ascalon-Haxtun complex, 0 to 3 percent slopes | 15,739 | 1.0 |
| 110 | Ascalon-Haxtun complex, dry, 0 to 3 percent slopes | 10,907 | 0.7 |
| 111 | Bacid silt loam, 0 to 2 percent slopes | 4,427 | 0.3 |
| 112 | Bankard-Glenberg complex, 0 to 3 percent slopes, occasionally flooded | 33,822 | 2.0 |
| 113 | Bijou loamy sand, 1 to 3 percent slopes | 2,852 | 0.2 |
| 114 | Bijou loamy sand, moist, 1 to 3 percent slopes | 9,597 | 0.6 |
| 115 | Bijou loamy sand, moist, 3 to 12 percent slopes | 597 | * |
| 116 | Blakeland loamy sand, 3 to 12 percent slopes | 826 | * |
| 117 | Bresser sandy loam, 1 to 5 percent slopes | 7,958 | 0.5 |
| 118 | Campo silt loam, 0 to 2 percent slopes | 25,992 | 1.6 |
| 119 | Canyon-Rock outcrop complex, 5 to 60 percent slopes | 221 | * |
| 120 | Colby silt loam, 1 to 3 percent slopes | 4,377 | 0.3 |
| 121 | Colby silt loam, 3 to 12 percent slopes | 22,282 | 1.3 |
| 122 | Colby-Weld silt loams, 1 to 5 percent slopes | 50,004 | 3.0 |
| 123 | Firstview loamy sand, 0 to 3 percent slopes | 11,961 | 0.7 |
| 124 | Fort Collins loam, 1 to 3 percent slopes | 19,381 | 1.2 |
| 125 | Fort Collins loam, 3 to 5 percent slopes | 7,810 | 0.5 |
| 126 | Fort Collins-Karval complex, 5 to 25 percent slopes | 8,182 | 0.5 |
| 127 | Fort Collins-Platner loams, 1 to 5 percent slopes | 41,850 | 2.5 |
| 128 | Fort Collins-Razor, moist, complex, 5 to 15 percent slopes | 9,863 | 0.6 |
| 129 | Fort loam, 1 to 3 percent slopes | 58,533 | 3.5 |
| 130 | Fort loam, 3 to 5 percent slopes | 25,858 | 1.6 |
| 131 | Fort-Karval complex, 5 to 25 percent slopes | 5,667 | 0.3 |
| 132 | Fort-Razor complex, 5 to 15 percent slopes | 1,734 | 0.1 |
| 133 | Haversid silt loam, 0 to 3 percent slopes, rarely flooded | 6,350 | 0.4 |
| 134 | Haverson loam, 0 to 3 percent slopes, rarely flooded | 5,079 | 0.3 |
| 135 | Haxtun loamy sand, 0 to 3 percent slopes | 2,668 | 0.2 |
| 136 | Haxtun loamy sand, dry, 0 to 3 percent slopes | 2,240 | 0.1 |
| 137 | Haxtun, dry-Olney loamy sands, 0 to 3 percent slopes | 4,322 | 0.3 |
| 138 | Haxtun-Olnest loamy sands, 0 to 3 percent slopes | 6,304 | 0.4 |
| 139 | Keith silt loam, 1 to 3 percent slopes | 3,112 | 0.2 |
| 140 | Keith silt loam, 3 to 10 percent slopes | 2,191 | 0.1 |
| 141 | Kim loam, 1 to 3 percent slopes | 1,586 | * |
| 142 | Kim loam, 3 to 12 percent slopes | 5,261 | 0.3 |
| 143 | Kimst loam, 1 to 3 percent slopes | 1,590 | * |
| 144 | Kimst loam, 3 to 12 percent slopes | 25,684 | 1.6 |
| 145 | Las Animas sandy loam, 0 to 3 percent slopes, occasionally flooded | 3,494 | 0.2 |
| 146 | Limon clay, 0 to 3 percent slopes, rarely flooded | 6,947 | 0.4 |
| 147 | Limon clay, moist, 0 to 3 percent slopes, rarely flooded | 2,015 | 0.1 |
| 148 | Manzanola clay loam, 1 to 5 percent slopes | 37,089 | 2.2 |
| 149 | Manzanst clay loam, 0 to 3 percent slopes, rarely flooded | 966 | * |
| 150 | Manzanst clay loam, 1 to 5 percent slopes | 45,169 | 2.7 |
| 151 | Midway clay loam, 1 to 5 percent slopes | 12,426 | 0.8 |
| 152 | Midway clay loam, moist, 1 to 5 percent slopes | 11,166 | 0.7 |
| 153 | Midway-Razor clay loams, 5 to 15 percent slopes | 7,938 | 0.5 |
| 154 | Midway-Razor clay loams, moist, 5 to 15 percent slopes | 44,390 | 2.7 |
| 155 | Midway-Rock outcrop complex, 5 to 40 percent slopes | 1,351 | * |
| 156 | Midway-Rock outcrop complex, moist, 5 to 40 percent slopes | 6,435 | 0.4 |
| 157 | Nunn clay loam, 3 to 5 percent slopes | 275 | * |
| 158 | Nunn-Sampson, rarely flooded, complex, 0 to 3 percent slopes | 5,046 | 0.3 |
| 159 | Nunn-Sampson, rarely flooded, complex, dry, 0 to 3 percent slopes | 501 | * |
| 160 | Olnest loamy sand, 1 to 5 percent slopes | 5,685 | 0.3 |
| 161 | Olnest sandy loam, 1 to 3 percent slopes | 18,348 | 1.1 |
| 162 | Olnest sandy loam, 3 to 5 percent slopes | 1,894 | 0.1 |
| 163 | Olnest sandy loam, 5 to 12 percent slopes | 5,764 | 0.3 |

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

| Map symbol | Soil name | Acres | Percent |
|---|---|---|---|
| 164 | Olney loamy sand, 1 to 5 percent slopes | 9,646 | 0.6 |
| 165 | Olney sandy loam, 1 to 3 percent slopes | 32,575 | 2.0 |
| 166 | Olney sandy loam, 3 to 5 percent slopes | 346 | * |
| 167 | Olney sandy loam, 5 to 12 percent slopes | 8,434 | 0.5 |
| 168 | Olney-Midway complex, 3 to 12 percent slopes | 1,886 | 0.1 |
| 169 | Otero sandy loam, 1 to 5 percent slopes | 4,083 | 0.2 |
| 170 | Oterodry fine sandy loam, 1 to 5 percent slopes | 2,617 | 0.2 |
| 171 | Oterodry fine sandy loam, 5 to 9 percent slopes | 5,944 | 0.4 |
| 172 | Platner loam, 0 to 3 percent slopes | 35,623 | 2.2 |
| 173 | Platner-Ascalon complex, 0 to 3 percent slopes | 34,975 | 2.1 |
| 174 | Pleasant loam, 0 to 1 percent slopes, rarely ponded | 899 | * |
| 175 | Rago silt loam, 0 to 2 percent slopes, rarely flooded | 14,455 | 0.9 |
| 176 | Rago silt loam, dry, 0 to 2 percent slopes, rarely flooded | 674 | * |
| 177 | Razor clay loam, 1 to 5 percent slopes | 19,125 | 1.2 |
| 178 | Razor clay loam, moist, 1 to 5 percent slopes | 30,140 | 1.8 |
| 179 | Sampson loam, 0 to 2 percent slopes, rarely flooded | 13,981 | 0.8 |
| 180 | Sampson loam, dry, 0 to 2 percent slopes, rarely flooded | 988 | * |
| 181 | Satanta loam, 1 to 3 percent slopes | 6,264 | 0.4 |
| 182 | Satanta loam, dry, 1 to 3 percent slopes | 15,412 | 0.9 |
| 183 | Seldom sandy loam, 0 to 3 percent slopes, rarely flooded | 2,005 | 0.1 |
| 184 | Shingle-Midway complex, 1 to 9 percent slopes | 165 | * |
| 185 | Shingle-Midway complex, moist, 1 to 9 percent slopes | 6,472 | 0.4 |
| 186 | Sundance loamy sand, 1 to 3 percent slopes | 2,225 | 0.1 |
| 187 | Table Mountain loam, 0 to 2 percent slopes, rarely flooded | 3,374 | 0.2 |
| 188 | Travessilla-Rock outcrop complex, 6 to 60 percent slopes | 2,838 | 0.2 |
| 189 | Truckton sandy loam, 1 to 5 percent slopes | 7,969 | 0.5 |
| 190 | Truckton sandy loam, 5 to 9 percent slopes | 4,042 | 0.2 |
| 191 | Truckton sandy loam, dry, 1 to 5 percent slopes | 8,062 | 0.5 |
| 192 | Truckton sandy loam, dry, 5 to 9 percent slopes | 3,576 | 0.2 |
| 193 | Valent sand, 3 to 20 percent slopes | 59,903 | 3.6 |
| 194 | Valent-Bijou complex, 1 to 12 percent slopes | 39,331 | 2.4 |
| 195 | Valent-Vona complex, 3 to 25 percent slopes | 20,716 | 1.3 |
| 196 | Valent-Vonid complex, 3 to 25 percent slopes | 14,288 | 0.9 |
| 197 | Vona loamy sand, 1 to 9 percent slopes | 8,218 | 0.5 |
| 198 | Vona sandy loam, 1 to 5 percent slopes | 24,415 | 1.5 |
| 199 | Vona sandy loam, 5 to 12 percent slopes | 8,991 | 0.5 |
| 200 | Vona-Karval-Midway, moist, complex, 5 to 25 percent slopes | 8,293 | 0.5 |
| 201 | Vona-Midway, moist, complex, 3 to 12 percent slopes | 1,869 | 0.1 |
| 202 | Vona-Seldom sandy loams, 3 to 25 percent slopes | 1,801 | 0.1 |
| 203 | Vonid loamy sand, 1 to 9 percent slopes | 26,426 | 1.6 |
| 204 | Vonid sandy loam, 1 to 5 percent slopes | 32,201 | 1.9 |
| 205 | Vonid sandy loam, 5 to 12 percent slopes | 10,774 | 0.7 |
| 206 | Vonid-Karval-Midway complex, 5 to 25 percent slopes | 13,013 | 0.8 |
| 207 | Vonid-Midway complex, 3 to 12 percent slopes | 5,594 | 0.3 |
| 208 | Vonid-Seldom sandy loams, 3 to 25 percent slopes | 4,075 | 0.2 |
| 209 | Wages loam, 2 to 6 percent slopes | 22,558 | 1.4 |
| 210 | Wages loam, 6 to 12 percent slopes | 16,163 | 1.0 |
| 211 | Wages loam, dry, 1 to 5 percent slopes | 1,354 | * |
| 212 | Wages-Karval complex, 6 to 15 percent slopes | 14,206 | 0.9 |
| 213 | Weld silt loam, 0 to 2 percent slopes | 120,275 | 7.3 |
| 214 | Weld silt loam, dry, 0 to 2 percent slopes | 74 | * |
| 215 | Wiley silt loam, 0 to 3 percent slopes | 44,138 | 2.7 |
| 216 | Wiley silt loam, 3 to 12 percent slopes | 12,596 | 0.8 |
| 217 | Wilid silt loam, 0 to 3 percent slopes | 29,120 | 1.8 |
| 218 | Water | 510 | * |
| 219 | Gravel pits | 183 | * |
| 220 | Access denied | 37,025 | 2.2 |
| | Total | 1,654,298 | 100.0 |

* Less than 0.1 percent.

**Table 5.--Prime Farmland**

**(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name.)**

| Map symbol | Soil name |
|---|---|
| 111 | Bacid silt loam, 0 to 2 percent slopes (where irrigated) |
| 118 | Campo silt loam, 0 to 2 percent slopes (where irrigated) |
| 124 | Fort Collins loam, 1 to 3 percent slopes (where irrigated) |
| 125 | Fort Collins loam, 3 to 5 percent slopes (where irrigated) |
| 127 | Fort Collins-Platner loams, 1 to 5 percent slopes (where irrigated) |
| 129 | Fort loam, 1 to 3 percent slopes (where irrigated) |
| 130 | Fort loam, 3 to 5 percent slopes (where irrigated) |
| 139 | Keith silt loam, 1 to 3 percent slopes (where irrigated) |
| 157 | Nunn clay loam, 3 to 5 percent slopes (where irrigated) |
| 158 | Nunn-Sampson, rarely flooded, complex, 0 to 3 percent slopes (where irrigated) |
| 159 | Nunn-Sampson, rarely flooded, complex, dry, 0 to 3 percent slopes (where irrigated) |
| 172 | Platner loam, 0 to 3 percent slopes (where irrigated) |
| 173 | Platner-Ascalon complex, 0 to 3 percent slopes (where irrigated) |
| 179 | Sampson loam, 0 to 2 percent slopes, rarely flooded (where irrigated) |
| 180 | Sampson loam, dry, 0 to 2 percent slopes, rarely flooded (where irrigated) |
| 181 | Satanta loam, 1 to 3 percent slopes (where irrigated) |
| 182 | Satanta loam, dry, 1 to 3 percent slopes (where irrigated) |
| 187 | Table Mountain loam, 0 to 2 percent slopes, rarely flooded (where irrigated) |
| 209 | Wages loam, 2 to 6 percent slopes (where irrigated) |
| 211 | Wages loam, dry, 1 to 5 percent slopes (where irrigated) |
| 213 | Weld silt loam, 0 to 2 percent slopes (where irrigated) |
| 214 | Weld silt loam, dry, 0 to 2 percent slopes (where irrigated) |

Table 6.--Land Capability and Yields per Acre of Crops

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.)

| Map symbol and soil name | Land capability | Corn | Grain sorghum | Millet | Sunflowers | Winter wheat-fallow |
|---|---|---|---|---|---|---|
| | | Bu | Bu | Bu | Lbs | Bu |
| 101: | | | | | | |
| Apishapa | 4w | --- | --- | --- | --- | --- |
| 102: | | | | | | |
| Arvada | 7s | --- | --- | --- | --- | --- |
| 103: | | | | | | |
| Ascalon | 3c | 57 | 30 | 22 | 1,110 | 24 |
| 104: | | | | | | |
| Ascalon | 3e | --- | --- | 20 | --- | 22 |
| 105: | | | | | | |
| Ascalon | 6e | --- | --- | --- | --- | --- |
| 106: | | | | | | |
| Ascalon | 4c | 43 | 20 | 18 | 700 | 20 |
| 107: | | | | | | |
| Ascalon | 4c | --- | --- | 16 | --- | 18 |
| 108: | | | | | | |
| Ascalon | 6e | --- | --- | --- | --- | --- |
| 109: | | | | | | |
| Ascalon | 3c | 57 | 30 | 22 | 1,110 | 24 |
| Haxtun | 3e | 57 | 30 | 30 | 1,110 | 30 |
| 110: | | | | | | |
| Ascalon | 4c | 43 | 20 | 18 | 700 | 20 |
| Haxtun | 4c | --- | 20 | 25 | --- | 20 |
| 111: | | | | | | |
| Bacid | 4c | 43 | 20 | 25 | 700 | 20 |
| 112: | | | | | | |
| Bankard | 6s | --- | --- | --- | --- | --- |
| Glenberg | 3e | --- | 20 | 22 | --- | 18 |
| 113: | | | | | | |
| Bijou | 4c | 43 | 20 | 25 | 700 | 18 |
| 114: | | | | | | |
| Bijou | 3e | 57 | 30 | 25 | 1,110 | 20 |
| 115: | | | | | | |
| Bijou | 6e | --- | --- | --- | --- | --- |
| 116: | | | | | | |
| Blakeland | 6e | --- | --- | --- | --- | --- |
| 117: | | | | | | |
| Bresser | 4c | 43 | 20 | 28 | 700 | 22 |
| 118: | | | | | | |
| Campo | 4c | 43 | 20 | 26 | 700 | 20 |

Table 6.--Land Capability and Yields per Acre of Crops--Continued

| Map symbol and soil name | Land capability | Corn | Grain sorghum | Millet | Sunflowers | Winter wheat-fallow |
|---|---|---|---|---|---|---|
| | | Bu | Bu | Bu | Lbs | Bu |
| 119: | | | | | | |
| Canyon | 7s | --- | --- | --- | --- | --- |
| Rock outcrop | 8s | --- | --- | --- | --- | --- |
| 120: | | | | | | |
| Colby | 3e | 57 | 30 | 30 | 1,110 | 30 |
| 121: | | | | | | |
| Colby | 6e | --- | --- | --- | --- | --- |
| 122: | | | | | | |
| Colby | 4e | 43 | 20 | 22 | 700 | 25 |
| Weld | 3c | 57 | 30 | 30 | 1,110 | 35 |
| 123: | | | | | | |
| Firstview | 7s | --- | --- | --- | --- | --- |
| 124: | | | | | | |
| Fort Collins | 3c | 57 | 30 | 30 | 1,110 | 30 |
| 125: | | | | | | |
| Fort Collins | 4e | --- | 20 | 20 | --- | 25 |
| 126: | | | | | | |
| Fort Collins | 6e | --- | --- | --- | --- | --- |
| Karval | 6e | --- | --- | --- | --- | --- |
| 127: | | | | | | |
| Fort Collins | 4e | --- | 20 | 20 | --- | 25 |
| Platner | 4e | 43 | 25 | 25 | 700 | 30 |
| 128: | | | | | | |
| Fort Collins | 6e | --- | --- | --- | --- | --- |
| Razor | 6e | --- | --- | --- | --- | --- |
| 129: | | | | | | |
| Fort | 4c | --- | 20 | 25 | 700 | 20 |
| 130: | | | | | | |
| Fort | 4e | --- | --- | 22 | --- | 25 |
| 131: | | | | | | |
| Fort | 6e | --- | --- | --- | --- | --- |
| Karval | 6e | --- | --- | --- | --- | --- |
| 132: | | | | | | |
| Fort | 6e | --- | --- | --- | --- | --- |
| Razor | 6e | --- | --- | --- | --- | --- |
| 133: | | | | | | |
| Haversid | 6c | --- | --- | --- | --- | --- |
| 134: | | | | | | |
| Haverson | 3e | 57 | 30 | 30 | 1,110 | 25 |
| 135: | | | | | | |
| Haxtun | 3e | 57 | 30 | 30 | 1,110 | 30 |

Table 6.--Land Capability and Yields per Acre of Crops--Continued

| Map symbol and soil name | Land capability | Corn | Grain sorghum | Millet | Sunflowers | Winter wheat-fallow |
|---|---|---|---|---|---|---|
| | | Bu | Bu | Bu | Lbs | Bu |
| 136: | | | | | | |
| Haxtun | 4c | --- | 20 | 25 | --- | 20 |
| 137: | | | | | | |
| Haxtun | 4c | --- | 20 | 25 | --- | 20 |
| Olney | 4c | --- | --- | 22 | --- | 18 |
| 138: | | | | | | |
| Haxtun | 3e | 57 | 30 | 30 | 1,110 | 30 |
| Olnest | 3e | 57 | 30 | 30 | 1,110 | 25 |
| 139: | | | | | | |
| Keith | 3e | 57 | 30 | 30 | 1,110 | 30 |
| 140: | | | | | | |
| Keith | 6e | --- | --- | --- | --- | --- |
| 141: | | | | | | |
| Kim | 4c | 57 | 30 | 30 | 1,110 | 26 |
| 142: | | | | | | |
| Kim | 6e | --- | --- | --- | --- | --- |
| 143: | | | | | | |
| Kimst | 3e | 57 | 30 | 30 | 1,110 | 25 |
| 144: | | | | | | |
| Kimst | 6e | --- | --- | --- | --- | --- |
| 145: | | | | | | |
| Las Animas | 4w | --- | --- | --- | --- | --- |
| 146: | | | | | | |
| Limon | 6s | --- | --- | --- | --- | --- |
| 147: | | | | | | |
| Limon | 6s | --- | --- | --- | --- | --- |
| 148: | | | | | | |
| Manzanola | 4e | --- | --- | 16 | --- | 16 |
| 149: | | | | | | |
| Manzanst | 3e | --- | --- | --- | --- | 26 |
| 150: | | | | | | |
| Manzanst | 3e | --- | --- | --- | --- | 26 |
| 151: | | | | | | |
| Midway | 6e | --- | --- | --- | --- | --- |
| 152: | | | | | | |
| Midway | 6e | --- | --- | --- | --- | --- |
| 153: | | | | | | |
| Midway | 6e | --- | --- | --- | --- | --- |
| Razor | 6e | --- | --- | --- | --- | --- |
| 154: | | | | | | |
| Midway | 6e | --- | --- | --- | --- | --- |
| Razor | 6e | --- | --- | --- | --- | --- |

Table 6.--Land Capability and Yields per Acre of Crops--Continued

| Map symbol and soil name | Land capability | Corn | Grain sorghum | Millet | Sunflowers | Winter wheat-fallow |
|---|---|---|---|---|---|---|
| | | Bu | Bu | Bu | Lbs | Bu |
| 155: | | | | | | |
| Midway | 6e | --- | --- | --- | --- | --- |
| Rock outcrop | 8s | --- | --- | --- | --- | --- |
| 156: | | | | | | |
| Midway | 6e | --- | --- | --- | --- | --- |
| Rock outcrop | 8s | --- | --- | --- | --- | --- |
| 157: | | | | | | |
| Nunn | 3e | 57 | 30 | 28 | 1,110 | 28 |
| 158: | | | | | | |
| Nunn | 3c | 57 | 30 | 30 | 1,110 | 30 |
| Sampson | 3c | 57 | 30 | 25 | 1,110 | 28 |
| 159: | | | | | | |
| Nunn | 4c | --- | --- | 22 | --- | 22 |
| Sampson | 4c | 43 | 20 | 20 | 700 | 25 |
| 160: | | | | | | |
| Olnest | 3e | 57 | 30 | 30 | 1,110 | 25 |
| 161: | | | | | | |
| Olnest | 3e | 57 | 30 | 30 | 1,110 | 25 |
| 162: | | | | | | |
| Olnest | 4e | 43 | 20 | 25 | 700 | 20 |
| 163: | | | | | | |
| Olnest | 6e | --- | --- | --- | --- | --- |
| 164: | | | | | | |
| Olney | 4c | --- | --- | 22 | --- | 18 |
| 165: | | | | | | |
| Olney | 4c | --- | 20 | 22 | --- | 18 |
| 166: | | | | | | |
| Olney | 4e | --- | --- | 22 | --- | 15 |
| 167: | | | | | | |
| Olney | 6e | --- | --- | --- | --- | --- |
| 168: | | | | | | |
| Olney | 6e | --- | --- | --- | --- | --- |
| Midway | 6e | --- | --- | --- | --- | --- |
| 169: | | | | | | |
| Otero | 4e | 43 | 20 | 25 | 700 | 25 |
| 170: | | | | | | |
| Oterodry | 4e | --- | --- | --- | --- | --- |
| 171: | | | | | | |
| Oterodry | 6e | --- | --- | --- | --- | --- |
| 172: | | | | | | |
| Platner | 3c | 57 | 30 | 30 | 1,110 | 35 |

Table 6.--Land Capability and Yields per Acre of Crops--Continued

| Map symbol and soil name | Land capability | Corn | Grain sorghum | Millet | Sunflowers | Winter wheat-fallow |
|---|---|---|---|---|---|---|
| | | Bu | Bu | Bu | Lbs | Bu |
| 173: | | | | | | |
| Platner | 3c | 57 | 30 | 30 | 1,110 | 35 |
| Ascalon | 3c | 57 | 30 | 22 | 1,110 | 24 |
| 174: | | | | | | |
| Pleasant | 4w | --- | --- | --- | --- | --- |
| 175: | | | | | | |
| Rago | 3c | 57 | 30 | 30 | 1,110 | 32 |
| 176: | | | | | | |
| Rago | 4c | 43 | 20 | 25 | 700 | 25 |
| 177: | | | | | | |
| Razor | 6s | --- | --- | --- | --- | --- |
| 178: | | | | | | |
| Razor | 6s | --- | --- | --- | --- | --- |
| 179: | | | | | | |
| Sampson | 3c | 57 | 30 | 25 | 1,110 | 28 |
| 180: | | | | | | |
| Sampson | 4c | 43 | 20 | 20 | 700 | 25 |
| 181: | | | | | | |
| Satanta | 3c | 57 | 30 | 30 | 1,110 | 29 |
| 182: | | | | | | |
| Satanta | 4c | 43 | 20 | 25 | 700 | 25 |
| 183: | | | | | | |
| Seldom | 3e | --- | --- | --- | --- | --- |
| 184: | | | | | | |
| Shingle | 6e | --- | --- | --- | --- | --- |
| Midway | 6e | --- | --- | --- | --- | --- |
| 185: | | | | | | |
| Shingle | 6e | --- | --- | --- | --- | --- |
| Midway | 6e | --- | --- | --- | --- | --- |
| 186: | | | | | | |
| Sundance | 4e | --- | --- | 18 | --- | 20 |
| 187: | | | | | | |
| Table Mountain | 3c | 57 | 30 | 25 | 1,110 | 27 |
| 188: | | | | | | |
| Travessilla | 7e | --- | --- | --- | --- | --- |
| Rock outcrop | 8s | --- | --- | --- | --- | --- |
| 189: | | | | | | |
| Truckton | 3e | --- | --- | 20 | 700 | 22 |
| 190: | | | | | | |
| Truckton | 6e | --- | --- | --- | --- | --- |
| 191: | | | | | | |
| Truckton | 4c | --- | --- | 20 | 700 | 18 |

Table 6.--Land Capability and Yields per Acre of Crops--Continued

| Map symbol and soil name | Land capability | Corn | Grain sorghum | Millet | Sunflowers | Winter wheat-fallow |
|---|---|---|---|---|---|---|
| | | Bu | Bu | Bu | Lbs | Bu |
| 192: | | | | | | |
| Truckton | 6e | --- | --- | --- | --- | --- |
| 193: | | | | | | |
| Valent | 6e | --- | --- | --- | --- | --- |
| 194: | | | | | | |
| Valent | 6e | --- | --- | --- | --- | --- |
| Bijou | 6e | --- | --- | --- | --- | --- |
| 195: | | | | | | |
| Valent | 6e | --- | --- | --- | --- | --- |
| Vona | 6e | --- | --- | --- | --- | --- |
| 196: | | | | | | |
| Valent | 6e | --- | --- | --- | --- | --- |
| Vonid | 6e | --- | --- | --- | --- | --- |
| 197: | | | | | | |
| Vona | 6e | --- | --- | --- | --- | --- |
| 198: | | | | | | |
| Vona | 3e | 57 | 25 | 30 | 1,110 | 25 |
| 199: | | | | | | |
| Vona | 6e | --- | --- | --- | --- | --- |
| 200: | | | | | | |
| Vona | 6e | --- | --- | --- | --- | --- |
| Karval | 6e | --- | --- | --- | --- | --- |
| Midway | 6e | --- | --- | --- | --- | --- |
| 201: | | | | | | |
| Vona | 6e | --- | --- | --- | --- | --- |
| Midway | 6e | --- | --- | --- | --- | --- |
| 202: | | | | | | |
| Vona | 6e | --- | --- | --- | --- | --- |
| Seldom | 6e | --- | --- | --- | --- | --- |
| 203: | | | | | | |
| Vonid | 6e | --- | --- | --- | --- | --- |
| 204: | | | | | | |
| Vonid | 4c | 43 | 20 | 25 | 700 | 18 |
| 205: | | | | | | |
| Vonid | 6e | --- | --- | --- | --- | --- |
| 206: | | | | | | |
| Vonid | 6e | --- | --- | --- | --- | --- |
| Karval | 6e | --- | --- | --- | --- | --- |
| Midway | 6e | --- | --- | --- | --- | --- |

Table 6.--Land Capability and Yields per Acre of Crops--Continued

| Map symbol and soil name | Land capability | Corn | Grain sorghum | Millet | Sunflowers | Winter wheat-fallow |
|---|---|---|---|---|---|---|
| | | Bu | Bu | Bu | Lbs | Bu |
| 207: | | | | | | |
| Vonid | 6e | --- | --- | --- | --- | --- |
| Midway | 6e | --- | --- | --- | --- | --- |
| 208: | | | | | | |
| Vonid | 6e | --- | --- | --- | --- | --- |
| Seldom | 6e | --- | --- | --- | --- | --- |
| 209: | | | | | | |
| Wages | 4e | 43 | 20 | 20 | 700 | 27 |
| 210: | | | | | | |
| Wages | 6e | --- | --- | --- | --- | --- |
| 211: | | | | | | |
| Wages | 4e | 43 | 20 | 20 | 700 | 25 |
| 212: | | | | | | |
| Wages | 6e | --- | --- | --- | --- | --- |
| Karval | 6e | --- | --- | --- | --- | --- |
| 213: | | | | | | |
| Weld | 3c | 57 | 30 | 30 | 1,110 | 35 |
| 214: | | | | | | |
| Weld | 4c | 43 | 20 | 25 | 700 | 25 |
| 215: | | | | | | |
| Wiley | 3e | 57 | 30 | 27 | 1,110 | 30 |
| 216: | | | | | | |
| Wiley | 6e | --- | --- | --- | --- | --- |
| 217: | | | | | | |
| Wilid | 4c | 43 | 20 | 22 | 700 | 28 |
| 218: | | | | | | |
| Water. | | | | | | |
| 219: | | | | | | |
| Gravel pits | 8s | --- | --- | --- | --- | --- |
| 220: | | | | | | |
| Access denied. | | | | | | |

**Table 7.--General Crop Production Index**

**(See text for an explanation of this index.)**

| Map symbol | Soil name | Crop index |
|---|---|---|
| 101 | Apishapa clay loam, 0 to 3 percent slopes, rarely ponded | 7 |
| 102 | Arvada clay loam, 0 to 5 percent slopes | 27 |
| 103 | Ascalon sandy loam, 1 to 3 percent slopes | 48 |
| 104 | Ascalon sandy loam, 3 to 5 percent slopes | 46 |
| 105 | Ascalon sandy loam, 5 to 9 percent slopes | 44 |
| 106 | Ascalon sandy loam, dry, 1 to 3 percent slopes | 44 |
| 107 | Ascalon sandy loam, dry, 3 to 5 percent slopes | 43 |
| 108 | Ascalon sandy loam, dry, 5 to 9 percent slopes | 42 |
| 109 | Ascalon-Haxtun complex, 0 to 3 percent slopes | 47 |
| 110 | Ascalon-Haxtun complex, dry, 0 to 3 percent slopes | 44 |
| 111 | Bacid silt loam, 0 to 2 percent slopes | 44 |
| 112 | Bankard-Glenberg complex, 0 to 3 percent slopes, occasionally flooded | 24 |
| 113 | Bijou loamy sand, 1 to 3 percent slopes | 31 |
| 114 | Bijou loamy sand, moist, 1 to 3 percent slopes | 32 |
| 115 | Bijou loamy sand, moist, 3 to 12 percent slopes | 31 |
| 116 | Blakeland loamy sand, 3 to 12 percent slopes | 21 |
| 117 | Bresser sandy loam, 1 to 5 percent slopes | 32 |
| 118 | Campo silt loam, 0 to 2 percent slopes | 43 |
| 119 | Canyon-Rock outcrop complex, 5 to 60 percent slopes | 3 |
| 120 | Colby silt loam, 1 to 3 percent slopes | 40 |
| 121 | Colby silt loam, 3 to 12 percent slopes | 38 |
| 122 | Colby-Weld silt loams, 1 to 5 percent slopes | 45 |
| 123 | Firstview loamy sand, 0 to 3 percent slopes | 29 |
| 124 | Fort Collins loam, 1 to 3 percent slopes | 53 |
| 125 | Fort Collins loam, 3 to 5 percent slopes | 49 |
| 126 | Fort Collins-Karval complex, 5 to 25 percent slopes | 35 |
| 127 | Fort Collins-Platner loams, 1 to 5 percent slopes | 51 |
| 128 | Fort Collins-Razor, moist, complex, 5 to 15 percent slopes | 33 |
| 129 | Fort loam, 1 to 3 percent slopes | 35 |
| 130 | Fort loam, 3 to 5 percent slopes | 35 |
| 131 | Fort-Karval complex, 5 to 25 percent slopes | 27 |
| 132 | Fort-Razor complex, 5 to 15 percent slopes | 26 |
| 133 | Haversid silt loam, 0 to 3 percent slopes, rarely flooded | 33 |
| 134 | Haverson loam, 0 to 3 percent slopes, rarely flooded | 41 |
| 135 | Haxtun loamy sand, 0 to 3 percent slopes | 46 |
| 136 | Haxtun loamy sand, dry, 0 to 3 percent slopes | 44 |
| 137 | Haxtun, dry-Olney loamy sands, 0 to 3 percent slopes | 44 |
| 138 | Haxtun-Olnest loamy sands, 0 to 3 percent slopes | 45 |
| 139 | Keith silt loam, 1 to 3 percent slopes | 51 |
| 140 | Keith silt loam, 3 to 10 percent slopes | 47 |
| 141 | Kim loam, 1 to 3 percent slopes | 42 |
| 142 | Kim loam, 3 to 12 percent slopes | 39 |
| 143 | Kimst loam, 1 to 3 percent slopes | 40 |
| 144 | Kimst loam, 3 to 12 percent slopes | 36 |
| 145 | Las Animas sandy loam, 0 to 3 percent slopes, occasionally flooded | 27 |
| 146 | Limon clay, 0 to 3 percent slopes, rarely flooded | 33 |
| 147 | Limon clay, moist, 0 to 3 percent slopes, rarely flooded | 35 |
| 148 | Manzanola clay loam, 1 to 5 percent slopes | 38 |
| 149 | Manzanst clay loam, 0 to 3 percent slopes, rarely flooded | 38 |
| 150 | Manzanst clay loam, 1 to 5 percent slopes | 38 |
| 151 | Midway clay loam, 1 to 5 percent slopes | 8 |
| 152 | Midway clay loam, moist, 1 to 5 percent slopes | 9 |
| 153 | Midway-Razor clay loams, 5 to 15 percent slopes | 11 |
| 154 | Midway-Razor clay loams, moist, 5 to 15 percent slopes | 12 |
| 155 | Midway-Rock outcrop complex, 5 to 40 percent slopes | 5 |
| 156 | Midway-Rock outcrop complex, moist, 5 to 40 percent slopes | 5 |
| 157 | Nunn clay loam, 3 to 5 percent slopes | 49 |

Table 7.--General Crop Production Index--Continued

| Map symbol | Soil name | Crop index |
|---|---|---|
| 158 | Nunn-Sampson, rarely flooded, complex, 0 to 3 percent slopes | 51 |
| 159 | Nunn-Sampson, rarely flooded, complex, dry, 0 to 3 percent slopes | 49 |
| 160 | Olnest loamy sand, 1 to 5 percent slopes | 42 |
| 161 | Olnest sandy loam, 1 to 3 percent slopes | 45 |
| 162 | Olnest sandy loam, 3 to 5 percent slopes | 44 |
| 163 | Olnest sandy loam, 5 to 12 percent slopes | 43 |
| 164 | Olney loamy sand, 1 to 5 percent slopes | 44 |
| 165 | Olney sandy loam, 1 to 3 percent slopes | 43 |
| 166 | Olney sandy loam, 3 to 5 percent slopes | 42 |
| 167 | Olney sandy loam, 5 to 12 percent slopes | 40 |
| 168 | Olney-Midway complex, 3 to 12 percent slopes | 28 |
| 169 | Otero sandy loam, 1 to 5 percent slopes | 31 |
| 170 | Oterodry fine sandy loam, 1 to 5 percent slopes | 32 |
| 171 | Oterodry fine sandy loam, 5 to 9 percent slopes | 33 |
| 172 | Platner loam, 0 to 3 percent slopes | 51 |
| 173 | Platner-Ascalon complex, 0 to 3 percent slopes | 49 |
| 174 | Pleasant loam, 0 to 1 percent slopes, rarely ponded | 9 |
| 175 | Rago silt loam, 0 to 2 percent slopes, rarely flooded | 52 |
| 176 | Rago silt loam, dry, 0 to 2 percent slopes, rarely flooded | 50 |
| 177 | Razor clay loam, 1 to 5 percent slopes | 20 |
| 178 | Razor clay loam, moist, 1 to 5 percent slopes | 22 |
| 179 | Sampson loam, 0 to 2 percent slopes, rarely flooded | 56 |
| 180 | Sampson loam, dry, 0 to 2 percent slopes, rarely flooded | 53 |
| 181 | Satanta loam, 1 to 3 percent slopes | 51 |
| 182 | Satanta loam, dry, 1 to 3 percent slopes | 49 |
| 183 | Seldom sandy loam, 0 to 3 percent slopes, rarely flooded | 34 |
| 184 | Shingle-Midway complex, 1 to 9 percent slopes | 10 |
| 185 | Shingle-Midway complex, moist, 1 to 9 percent slopes | 10 |
| 186 | Sundance loamy sand, 1 to 3 percent slopes | 42 |
| 187 | Table Mountain loam, 0 to 2 percent slopes, rarely flooded | 56 |
| 188 | Travessilla-Rock outcrop complex, 6 to 60 percent slopes | 4 |
| 189 | Truckton sandy loam, 1 to 5 percent slopes | 29 |
| 190 | Truckton sandy loam, 5 to 9 percent slopes | 27 |
| 191 | Truckton sandy loam, dry, 1 to 5 percent slopes | 27 |
| 192 | Truckton sandy loam, dry, 5 to 9 percent slopes | 25 |
| 193 | Valent sand, 3 to 20 percent slopes | 19 |
| 194 | Valent-Bijou complex, 1 to 12 percent slopes | 23 |
| 195 | Valent-Vona complex, 3 to 25 percent slopes | 24 |
| 196 | Valent-Vonid complex, 3 to 25 percent slopes | 25 |
| 197 | Vona loamy sand, 1 to 9 percent slopes | 30 |
| 198 | Vona sandy loam, 1 to 5 percent slopes | 33 |
| 199 | Vona sandy loam, 5 to 12 percent slopes | 31 |
| 200 | Vona-Karval-Midway, moist, complex, 5 to 25 percent slopes | 19 |
| 201 | Vona-Midway, moist, complex, 3 to 12 percent slopes | 23 |
| 202 | Vona-Seldom sandy loams, 3 to 25 percent slopes | 26 |
| 203 | Vonid loamy sand, 1 to 9 percent slopes | 31 |
| 204 | Vonid sandy loam, 1 to 5 percent slopes | 35 |
| 205 | Vonid sandy loam, 5 to 12 percent slopes | 32 |
| 206 | Vonid-Karval-Midway complex, 5 to 25 percent slopes | 20 |
| 207 | Vonid-Midway complex, 3 to 12 percent slopes | 24 |
| 208 | Vonid-Seldom sandy loams, 3 to 25 percent slopes | 29 |
| 209 | Wages loam, 2 to 6 percent slopes | 45 |
| 210 | Wages loam, 6 to 12 percent slopes | 41 |
| 211 | Wages loam, dry, 1 to 5 percent slopes | 43 |
| 212 | Wages-Karval complex, 6 to 15 percent slopes | 36 |
| 213 | Weld silt loam, 0 to 2 percent slopes | 52 |
| 214 | Weld silt loam, dry, 0 to 2 percent slopes | 48 |
| 215 | Wiley silt loam, 0 to 3 percent slopes | 40 |
| 216 | Wiley silt loam, 3 to 12 percent slopes | 37 |
| 217 | Wilid silt loam, 0 to 3 percent slopes | 38 |
| 218 | Water | 0 |
| 219 | Gravel pits | 16 |
| 220 | Access denied | 0 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities

(Only the soils that support rangeland vegetation suitable for grazing are listed. See text for definitions of terms used in this table.)

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 101: | | | | | | |
| Apishapa, rarely ponded | Plains Swale | 1,800 | 1,200 | 900 | western wheatgrass | 65 |
| | | | | | blue grama | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | inland saltgrass | 5 |
| | | | | | American vetch | 3 |
| | | | | | sun sedge | 3 |
| 102: | | | | | | |
| Arvada | Salt Flat | 1,600 | 1,050 | 450 | alkali sacaton | 45 |
| | | | | | blue grama | 20 |
| | | | | | western wheatgrass | 15 |
| | | | | | galleta | 10 |
| | | | | | fourwing saltbush | 5 |
| | | | | | inland saltgrass | 3 |
| 103: | | | | | | |
| Ascalon | Sandy Plains | 2,100 | 1,700 | 850 | prairie sandreed | 30 |
| | | | | | blue grama | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sand bluestem | 10 |
| | | | | | switchgrass | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | thickspike wheatgrass | 5 |
| 104: | | | | | | |
| Ascalon | Sandy Plains | 2,100 | 1,700 | 850 | prairie sandreed | 30 |
| | | | | | blue grama | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sand bluestem | 10 |
| | | | | | switchgrass | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | thickspike wheatgrass | 5 |
| 105: | | | | | | |
| Ascalon | Sandy Plains | 2,100 | 1,700 | 850 | prairie sandreed | 30 |
| | | | | | blue grama | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sand bluestem | 10 |
| | | | | | switchgrass | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | thickspike wheatgrass | 5 |
| 106: | | | | | | |
| Ascalon, dry | Sandy Plains | 1,700 | 1,050 | 550 | blue grama | 40 |
| | | | | | needleandthread | 15 |
| | | | | | prairie sandreed | 10 |
| | | | | | thickspike wheatgrass | 10 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sideoats grama | 5 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 107: | | | | | | |
| Ascalon, dry--- | Sandy Plains | 1,700 | 1,050 | 550 | blue grama | 40 |
| | | | | | needleandthread | 15 |
| | | | | | prairie sandreed | 10 |
| | | | | | thickspike wheatgrass | 10 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sideoats grama | 5 |
| 108: | | | | | | |
| Ascalon, dry--- | Sandy Plains | 1,700 | 1,050 | 550 | blue grama | 40 |
| | | | | | needleandthread | 15 |
| | | | | | prairie sandreed | 10 |
| | | | | | thickspike wheatgrass | 10 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sideoats grama | 5 |
| 109: | | | | | | |
| Ascalon-------- | Sandy Plains | 2,100 | 1,700 | 850 | prairie sandreed | 30 |
| | | | | | blue grama | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sand bluestem | 10 |
| | | | | | switchgrass | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | thickspike wheatgrass | 5 |
| Haxtun--------- | Sandy Plains | 2,100 | 1,700 | 850 | prairie sandreed | 30 |
| | | | | | blue grama | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sand bluestem | 10 |
| | | | | | switchgrass | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | thickspike wheatgrass | 5 |
| 110: | | | | | | |
| Ascalon, dry--- | Sandy Plains | 1,700 | 1,050 | 550 | blue grama | 40 |
| | | | | | needleandthread | 15 |
| | | | | | prairie sandreed | 10 |
| | | | | | thickspike wheatgrass | 10 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sideoats grama | 5 |
| Haxtun, dry---- | Sandy Plains | 1,700 | 1,050 | 550 | blue grama | 40 |
| | | | | | needleandthread | 15 |
| | | | | | prairie sandreed | 10 |
| | | | | | thickspike wheatgrass | 10 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sideoats grama | 5 |
| 111: | | | | | | |
| Bacid---------- | Loamy Plains | 1,200 | 800 | 200 | blue grama | 50 |
| | | | | | western wheatgrass | 20 |
| | | | | | galleta | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 3 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 112: | | | | | | |
| Bankard, occasionally flooded | Sandy Bottom Land | 2,500 | 1,800 | 1,200 | switchgrass | 25 |
| | | | | | prairie sandreed | 20 |
| | | | | | sand bluestem | 15 |
| | | | | | yellow Indiangrass | 10 |
| | | | | | inland saltgrass | 5 |
| | | | | | little bluestem | 5 |
| | | | | | needleandthread | 5 |
| | | | | | sideoats grama | 3 |
| | | | | | western wheatgrass | 2 |
| | | | | | sand sagebrush | 1 |
| Glenberg, occasionally flooded | Sandy Bottom Land | 2,300 | 1,700 | 900 | switchgrass | 25 |
| | | | | | sand bluestem | 15 |
| | | | | | prairie sandreed | 10 |
| | | | | | yellow Indiangrass | 7 |
| | | | | | blue grama | 5 |
| | | | | | Canada wildrye | 5 |
| | | | | | little bluestem | 5 |
| | | | | | needleandthread | 5 |
| | | | | | sedge | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | western wheatgrass | 5 |
| | | | | | tall dropseed | 3 |
| 113: | | | | | | |
| Bijou | Sandy Plains | 1,600 | 1,000 | 500 | blue grama | 45 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | prairie sandreed | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sun sedge | 5 |
| | | | | | sand sagebrush | 3 |
| 114: | | | | | | |
| Bijou, moist | Sandy Plains | 2,000 | 1,600 | 800 | blue grama | 25 |
| | | | | | prairie sandreed | 25 |
| | | | | | little bluestem | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | needleandthread | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | switchgrass | 5 |
| | | | | | sand dropseed | 3 |
| | | | | | sand sagebrush | 3 |
| 115: | | | | | | |
| Bijou, moist | Sandy Plains | 2,000 | 1,600 | 800 | blue grama | 25 |
| | | | | | prairie sandreed | 25 |
| | | | | | little bluestem | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | needleandthread | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | switchgrass | 5 |
| | | | | | sand dropseed | 3 |
| | | | | | sand sagebrush | 3 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 116: | | | | | | |
| Blakeland | Deep Sands | 2,500 | 1,800 | 1,200 | sand bluestem | 30 |
| | | | | | prairie sandreed | 20 |
| | | | | | switchgrass | 15 |
| | | | | | yellow Indiangrass | 10 |
| | | | | | needleandthread | 7 |
| | | | | | blue grama | 5 |
| | | | | | little bluestem | 5 |
| | | | | | sand dropseed | 3 |
| | | | | | sand sagebrush | 3 |
| 117: | | | | | | |
| Bresser | Sandy Plains | 1,700 | 1,050 | 550 | blue grama | 40 |
| | | | | | needleandthread | 15 |
| | | | | | prairie sandreed | 10 |
| | | | | | thickspike wheatgrass | 10 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sideoats grama | 5 |
| 118: | | | | | | |
| Campo | Loamy Plains | 1,200 | 800 | 200 | blue grama | 50 |
| | | | | | western wheatgrass | 20 |
| | | | | | galleta | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 119: | | | | | | |
| Canyon | Limestone Breaks | 1,250 | 850 | 550 | little bluestem | 20 |
| | | | | | sideoats grama | 20 |
| | | | | | blue grama | 10 |
| | | | | | Indian ricegrass | 10 |
| | | | | | hairy grama | 5 |
| | | | | | needleandthread | 5 |
| | | | | | perennial forbs | 5 |
| | | | | | shrubs | 5 |
| | | | | | threadleaf sedge | 5 |
| | | | | | western wheatgrass | 5 |
| Rock outcrop. | | | | | | |
| 120: | | | | | | |
| Colby | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | needleandthread | 5 |
| | | | | | fourwing saltbush | 3 |
| 121: | | | | | | |
| Colby | Loamy Slopes | 1,200 | 800 | 400 | blue grama | 35 |
| | | | | | western wheatgrass | 25 |
| | | | | | green needlegrass | 15 |
| | | | | | sideoats grama | 7 |
| | | | | | buffalograss | 5 |
| | | | | | little bluestem | 5 |
| | | | | | sand dropseed | 3 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 122: | | | | | | |
| Colby | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | needleandthread | 5 |
| | | | | | fourwing saltbush | 3 |
| Weld | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 123: | | | | | | |
| Firstview | Sandy Salt Flat | 2,200 | 1,400 | 700 | alkali sacaton | 35 |
| | | | | | blue grama | 20 |
| | | | | | switchgrass | 15 |
| | | | | | sand bluestem | 10 |
| | | | | | western wheatgrass | 10 |
| | | | | | inland saltgrass | 5 |
| | | | | | sand sagebrush | 3 |
| 124: | | | | | | |
| Fort Collins | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 125: | | | | | | |
| Fort Collins | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 126: | | | | | | |
| Fort Collins | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| Karval | Gravel Breaks | 1,450 | 850 | 450 | blue grama | 20 |
| | | | | | little bluestem | 15 |
| | | | | | sideoats grama | 15 |
| | | | | | prairie sandreed | 10 |
| | | | | | Indian ricegrass | 5 |
| | | | | | needleandthread | 5 |
| | | | | | sand dropseed | 3 |
| 127: | | | | | | |
| Fort Collins | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 127: | | | | | | |
| Platner | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 128: | | | | | | |
| Fort Collins | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| Razor, moist | Clayey Plains | 1,500 | 1,000 | 500 | western wheatgrass | 35 |
| | | | | | blue grama | 25 |
| | | | | | fourwing saltbush | 10 |
| | | | | | green needlegrass | 10 |
| | | | | | alkali sacaton | 5 |
| | | | | | winterfat | 5 |
| 129: | | | | | | |
| Fort | Loamy Plains | 1,200 | 800 | 200 | blue grama | 50 |
| | | | | | western wheatgrass | 15 |
| | | | | | galleta | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | green needlegrass | 5 |
| | | | | | sand dropseed | 5 |
| 130: | | | | | | |
| Fort | Loamy Plains | 1,200 | 800 | 200 | blue grama | 50 |
| | | | | | western wheatgrass | 15 |
| | | | | | galleta | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | green needlegrass | 5 |
| | | | | | sand dropseed | 5 |
| 131: | | | | | | |
| Fort | Loamy Plains | 1,200 | 800 | 200 | blue grama | 50 |
| | | | | | western wheatgrass | 15 |
| | | | | | galleta | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | green needlegrass | 5 |
| | | | | | sand dropseed | 5 |
| Karval | Gravel Breaks | 1,400 | 800 | 400 | sideoats grama | 35 |
| | | | | | blue grama | 30 |
| | | | | | little bluestem | 15 |
| | | | | | galleta | 10 |
| | | | | | needleandthread | 5 |
| | | | | | sand dropseed | 3 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 132: | | | | | | |
| Fort | Loamy Plains | 1,200 | 800 | 200 | blue grama | 50 |
| | | | | | western wheatgrass | 15 |
| | | | | | galleta | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | green needlegrass | 5 |
| | | | | | sand dropseed | 5 |
| Razor | Alkaline Plains | 1,500 | 1,200 | 500 | alkali sacaton | 45 |
| | | | | | galleta | 20 |
| | | | | | blue grama | 15 |
| | | | | | western wheatgrass | 10 |
| | | | | | fourwing saltbush | 5 |
| 133: | | | | | | |
| Haversid, rarely flooded | Saline Overflow | 2,300 | 1,500 | 700 | alkali sacaton | 35 |
| | | | | | western wheatgrass | 25 |
| | | | | | blue grama | 10 |
| | | | | | fourwing saltbush | 10 |
| | | | | | vine mesquite | 7 |
| | | | | | galleta | 5 |
| | | | | | inland saltgrass | 3 |
| 134: | | | | | | |
| Haverson, rarely flooded | Overflow | 2,600 | 1,900 | 1,100 | western wheatgrass | 35 |
| | | | | | green needlegrass | 20 |
| | | | | | switchgrass | 15 |
| | | | | | blue grama | 10 |
| | | | | | fourwing saltbush | 7 |
| | | | | | big bluestem | 5 |
| 135: | | | | | | |
| Haxtun | Sandy Plains | 2,100 | 1,700 | 850 | prairie sandreed | 30 |
| | | | | | blue grama | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sand bluestem | 10 |
| | | | | | switchgrass | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | thickspike wheatgrass | 5 |
| 136: | | | | | | |
| Haxtun, dry | Sandy Plains | 1,700 | 1,050 | 550 | blue grama | 40 |
| | | | | | needleandthread | 15 |
| | | | | | prairie sandreed | 10 |
| | | | | | thickspike wheatgrass | 10 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sideoats grama | 5 |
| 137: | | | | | | |
| Haxtun, dry | Sandy Plains | 1,700 | 1,050 | 550 | blue grama | 40 |
| | | | | | needleandthread | 15 |
| | | | | | prairie sandreed | 10 |
| | | | | | thickspike wheatgrass | 10 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sideoats grama | 5 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 137: | | | | | | |
| Olney | Sandy Plains | 1,550 | 950 | 450 | blue grama | 50 |
| | | | | | sand dropseed | 10 |
| | | | | | little bluestem | 7 |
| | | | | | needleandthread | 5 |
| | | | | | sand sagebrush | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | sun sedge | 5 |
| | | | | | prairie sandreed | 3 |
| 138: | | | | | | |
| Haxtun | Sandy Plains | 2,100 | 1,700 | 850 | prairie sandreed | 30 |
| | | | | | blue grama | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sand bluestem | 10 |
| | | | | | switchgrass | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | thickspike wheatgrass | 5 |
| Olnest | Sandy Plains | 1,900 | 1,500 | 750 | blue grama | 25 |
| | | | | | prairie sandreed | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | thickspike wheatgrass | 5 |
| | | | | | sand sagebrush | 3 |
| 139: | | | | | | |
| Keith | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 140: | | | | | | |
| Keith | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 141: | | | | | | |
| Kim | Loamy Plains | 1,200 | 800 | 200 | blue grama | 50 |
| | | | | | western wheatgrass | 15 |
| | | | | | galleta | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | green needlegrass | 5 |
| | | | | | sand dropseed | 5 |
| 142: | | | | | | |
| Kim | Loamy Plains | 1,200 | 800 | 200 | blue grama | 50 |
| | | | | | western wheatgrass | 15 |
| | | | | | galleta | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | green needlegrass | 5 |
| | | | | | sand dropseed | 5 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 143: | | | | | | |
| Kimst | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 144: | | | | | | |
| Kimst | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 145: | | | | | | |
| Las Animas, occasionally flooded | Salt Meadow | 3,500 | 2,600 | 1,400 | alkali sacaton | 40 |
| | | | | | switchgrass | 15 |
| | | | | | western wheatgrass | 15 |
| | | | | | alkali bluegrass | 10 |
| | | | | | Baltic rush | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | inland saltgrass | 5 |
| | | | | | Nebraska sedge | 5 |
| 146: | | | | | | |
| Limon, rarely flooded | Salt Flat | 1,500 | 1,000 | 400 | alkali sacaton | 40 |
| | | | | | blue grama | 25 |
| | | | | | fourwing saltbush | 10 |
| | | | | | western wheatgrass | 10 |
| | | | | | galleta | 5 |
| | | | | | inland saltgrass | 5 |
| 147: | | | | | | |
| Limon, moist, rarely flooded | Salt Flat | 1,800 | 1,100 | 500 | alkali sacaton | 35 |
| | | | | | blue grama | 20 |
| | | | | | western wheatgrass | 20 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | inland saltgrass | 5 |
| 148: | | | | | | |
| Manzanola | Alkaline Plains | 1,500 | 1,200 | 500 | alkali sacaton | 45 |
| | | | | | galleta | 20 |
| | | | | | blue grama | 15 |
| | | | | | western wheatgrass | 10 |
| | | | | | fourwing saltbush | 5 |
| 149: | | | | | | |
| Manzanst, rarely flooded | Overflow | 2,600 | 1,900 | 1,100 | western wheatgrass | 35 |
| | | | | | green needlegrass | 20 |
| | | | | | switchgrass | 15 |
| | | | | | blue grama | 10 |
| | | | | | fourwing saltbush | 7 |
| | | | | | big bluestem | 5 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 150: | | | | | | |
| Manzanst------- | Alkaline Plains | 1,500 | 1,200 | 500 | alkali sacaton-------------- | 40 |
| | | | | | galleta--------------------- | 20 |
| | | | | | blue grama------------------- | 15 |
| | | | | | western wheatgrass----------- | 10 |
| | | | | | buffalograss----------------- | 5 |
| 151: | | | | | | |
| Midway--------- | Shaly Plains | 1,000 | 550 | 300 | alkali sacaton-------------- | 40 |
| | | | | | galleta--------------------- | 25 |
| | | | | | blue grama------------------- | 20 |
| | | | | | western wheatgrass----------- | 10 |
| | | | | | fourwing saltbush------------ | 5 |
| | | | | | winterfat-------------------- | 5 |
| 152: | | | | | | |
| Midway, moist-- | Shaly Plains | 1,200 | 700 | 400 | alkali sacaton-------------- | 25 |
| | | | | | western wheatgrass----------- | 25 |
| | | | | | blue grama------------------- | 15 |
| | | | | | sideoats grama--------------- | 15 |
| | | | | | green needlegrass------------ | 10 |
| | | | | | fourwing saltbush------------ | 5 |
| | | | | | winterfat-------------------- | 5 |
| 153: | | | | | | |
| Midway--------- | Shaly Plains | 1,000 | 550 | 300 | alkali sacaton-------------- | 40 |
| | | | | | galleta--------------------- | 25 |
| | | | | | blue grama------------------- | 20 |
| | | | | | western wheatgrass----------- | 10 |
| | | | | | fourwing saltbush------------ | 5 |
| | | | | | winterfat-------------------- | 5 |
| Razor---------- | Alkaline Plains | 1,500 | 1,200 | 500 | alkali sacaton-------------- | 45 |
| | | | | | galleta--------------------- | 20 |
| | | | | | blue grama------------------- | 15 |
| | | | | | western wheatgrass----------- | 10 |
| | | | | | fourwing saltbush------------ | 5 |
| 154: | | | | | | |
| Midway, moist-- | Shaly Plains | 1,200 | 700 | 400 | alkali sacaton-------------- | 25 |
| | | | | | western wheatgrass----------- | 25 |
| | | | | | blue grama------------------- | 15 |
| | | | | | sideoats grama--------------- | 15 |
| | | | | | green needlegrass------------ | 10 |
| | | | | | fourwing saltbush------------ | 5 |
| | | | | | winterfat-------------------- | 5 |
| Razor, moist--- | Clayey Plains | 1,500 | 1,000 | 500 | western wheatgrass----------- | 35 |
| | | | | | blue grama------------------- | 25 |
| | | | | | fourwing saltbush------------ | 10 |
| | | | | | green needlegrass------------ | 10 |
| | | | | | alkali sacaton-------------- | 5 |
| | | | | | winterfat-------------------- | 5 |
| 155: | | | | | | |
| Midway--------- | Shaly Plains | 1,000 | 550 | 300 | alkali sacaton-------------- | 40 |
| | | | | | galleta--------------------- | 25 |
| | | | | | blue grama------------------- | 20 |
| | | | | | western wheatgrass----------- | 10 |
| | | | | | fourwing saltbush------------ | 5 |
| | | | | | winterfat-------------------- | 5 |
| Rock outcrop. | | | | | | |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 156: | | | | | | |
| Midway, moist-- | Shaly Plains | 1,200 | 700 | 400 | alkali sacaton | 25 |
| | | | | | western wheatgrass | 25 |
| | | | | | blue grama | 15 |
| | | | | | sideoats grama | 15 |
| | | | | | green needlegrass | 10 |
| | | | | | fourwing saltbush | 5 |
| | | | | | winterfat | 5 |
| Rock outcrop, moist. | | | | | | |
| 157: | | | | | | |
| Nunn | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 158: | | | | | | |
| Nunn | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| Sampson, rarely flooded | Overflow | 2,600 | 1,900 | 1,100 | western wheatgrass | 35 |
| | | | | | green needlegrass | 20 |
| | | | | | switchgrass | 15 |
| | | | | | blue grama | 10 |
| | | | | | fourwing saltbush | 7 |
| | | | | | big bluestem | 5 |
| 159: | | | | | | |
| Nunn, dry | Loamy Plains | 1,200 | 800 | 200 | blue grama | 50 |
| | | | | | western wheatgrass | 20 |
| | | | | | galleta | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | winterfat | 3 |
| Sampson, dry, rarely flooded | Saline Overflow | 2,300 | 1,500 | 700 | alkali sacaton | 35 |
| | | | | | western wheatgrass | 25 |
| | | | | | blue grama | 10 |
| | | | | | fourwing saltbush | 10 |
| | | | | | vine mesquite | 7 |
| | | | | | galleta | 5 |
| | | | | | inland saltgrass | 3 |
| 160: | | | | | | |
| Olnest | Sandy Plains | 1,900 | 1,500 | 750 | blue grama | 25 |
| | | | | | prairie sandreed | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | thickspike wheatgrass | 5 |
| | | | | | sand sagebrush | 3 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 161: | | | | | | |
| Olnest | Sandy Plains | 1,900 | 1,500 | 750 | blue grama | 25 |
| | | | | | prairie sandreed | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | thickspike wheatgrass | 5 |
| | | | | | sand sagebrush | 3 |
| 162: | | | | | | |
| Olnest | Sandy Plains | 1,900 | 1,500 | 750 | blue grama | 25 |
| | | | | | prairie sandreed | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | thickspike wheatgrass | 5 |
| | | | | | sand sagebrush | 3 |
| 163: | | | | | | |
| Olnest | Sandy Plains | 1,900 | 1,500 | 750 | blue grama | 25 |
| | | | | | prairie sandreed | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | thickspike wheatgrass | 5 |
| | | | | | sand sagebrush | 3 |
| 164: | | | | | | |
| Olney | Sandy Plains | 1,550 | 950 | 450 | blue grama | 50 |
| | | | | | sand dropseed | 10 |
| | | | | | little bluestem | 7 |
| | | | | | needleandthread | 5 |
| | | | | | sand sagebrush | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | sun sedge | 5 |
| | | | | | prairie sandreed | 3 |
| 165: | | | | | | |
| Olney | Sandy Plains | 1,550 | 950 | 450 | blue grama | 50 |
| | | | | | sand dropseed | 10 |
| | | | | | little bluestem | 7 |
| | | | | | needleandthread | 5 |
| | | | | | sand sagebrush | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | sun sedge | 5 |
| | | | | | prairie sandreed | 3 |
| 166: | | | | | | |
| Olney | Sandy Plains | 1,550 | 950 | 450 | blue grama | 50 |
| | | | | | sand dropseed | 10 |
| | | | | | little bluestem | 7 |
| | | | | | needleandthread | 5 |
| | | | | | sand sagebrush | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | sun sedge | 5 |
| | | | | | prairie sandreed | 3 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 167: | | | | | | |
| Olney | Sandy Plains | 1,550 | 950 | 450 | blue grama | 50 |
| | | | | | sand dropseed | 10 |
| | | | | | little bluestem | 7 |
| | | | | | needleandthread | 5 |
| | | | | | sand sagebrush | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | sun sedge | 5 |
| | | | | | prairie sandreed | 3 |
| 168: | | | | | | |
| Olney | Sandy Plains | 1,550 | 950 | 450 | blue grama | 50 |
| | | | | | sand dropseed | 10 |
| | | | | | little bluestem | 7 |
| | | | | | needleandthread | 5 |
| | | | | | sand sagebrush | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | sun sedge | 5 |
| | | | | | prairie sandreed | 3 |
| Midway | Shaly Plains | 1,000 | 550 | 300 | alkali sacaton | 40 |
| | | | | | galleta | 25 |
| | | | | | blue grama | 20 |
| | | | | | western wheatgrass | 10 |
| | | | | | fourwing saltbush | 5 |
| | | | | | winterfat | 5 |
| 169: | | | | | | |
| Otero | Sandy Plains | 1,900 | 1,500 | 750 | blue grama | 25 |
| | | | | | prairie sandreed | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | thickspike wheatgrass | 5 |
| | | | | | sand sagebrush | 3 |
| 170: | | | | | | |
| Oterodry | Sandy Plains | 1,550 | 950 | 450 | blue grama | 50 |
| | | | | | sand dropseed | 10 |
| | | | | | little bluestem | 7 |
| | | | | | needleandthread | 5 |
| | | | | | sand sagebrush | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | sun sedge | 5 |
| | | | | | prairie sandreed | 3 |
| 171: | | | | | | |
| Oterodry | Sandy Plains | 1,550 | 950 | 450 | blue grama | 50 |
| | | | | | sand dropseed | 10 |
| | | | | | little bluestem | 7 |
| | | | | | needleandthread | 5 |
| | | | | | sand sagebrush | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | sun sedge | 5 |
| | | | | | prairie sandreed | 3 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 172: | | | | | | |
| Platner | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 173: | | | | | | |
| Platner | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| Ascalon | Sandy Plains | 2,100 | 1,700 | 850 | prairie sandreed | 30 |
| | | | | | blue grama | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sand bluestem | 10 |
| | | | | | switchgrass | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | thickspike wheatgrass | 5 |
| 174: | | | | | | |
| Pleasant, rarely ponded | Plains Swale | 1,800 | 1,200 | 900 | western wheatgrass | 65 |
| | | | | | blue grama | 10 |
| | | | | | buffalograss | 5 |
| | | | | | inland saltgrass | 5 |
| | | | | | sun sedge | 5 |
| 175: | | | | | | |
| Rago, rarely flooded | Overflow | 2,600 | 1,900 | 1,100 | western wheatgrass | 35 |
| | | | | | green needlegrass | 20 |
| | | | | | switchgrass | 15 |
| | | | | | blue grama | 10 |
| | | | | | fourwing saltbush | 7 |
| | | | | | big bluestem | 5 |
| 176: | | | | | | |
| Rago, dry, rarely flooded | Saline Overflow | 2,300 | 1,500 | 700 | alkali sacaton | 35 |
| | | | | | western wheatgrass | 25 |
| | | | | | blue grama | 10 |
| | | | | | fourwing saltbush | 10 |
| | | | | | vine mesquite | 7 |
| | | | | | galleta | 5 |
| | | | | | inland saltgrass | 3 |
| 177: | | | | | | |
| Razor | Alkaline Plains | 1,500 | 1,200 | 500 | alkali sacaton | 45 |
| | | | | | galleta | 20 |
| | | | | | blue grama | 15 |
| | | | | | western wheatgrass | 10 |
| | | | | | fourwing saltbush | 5 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 178: | | | | | | |
| Razor, moist | Clayey Plains | 1,500 | 1,000 | 500 | western wheatgrass | 35 |
| | | | | | blue grama | 25 |
| | | | | | fourwing saltbush | 10 |
| | | | | | green needlegrass | 10 |
| | | | | | alkali sacaton | 5 |
| | | | | | winterfat | 5 |
| 179: | | | | | | |
| Sampson, rarely flooded | Overflow | 2,600 | 1,900 | 1,100 | western wheatgrass | 35 |
| | | | | | green needlegrass | 20 |
| | | | | | switchgrass | 15 |
| | | | | | blue grama | 10 |
| | | | | | fourwing saltbush | 7 |
| | | | | | big bluestem | 5 |
| 180: | | | | | | |
| Sampson, dry, rarely flooded | Saline Overflow | 2,300 | 1,500 | 700 | alkali sacaton | 35 |
| | | | | | western wheatgrass | 25 |
| | | | | | blue grama | 10 |
| | | | | | fourwing saltbush | 10 |
| | | | | | vine mesquite | 7 |
| | | | | | galleta | 5 |
| | | | | | inland saltgrass | 3 |
| 181: | | | | | | |
| Satanta | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 182: | | | | | | |
| Satanta, dry | Loamy Plains | 1,200 | 800 | 200 | blue grama | 50 |
| | | | | | western wheatgrass | 15 |
| | | | | | galleta | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | green needlegrass | 5 |
| | | | | | sand dropseed | 5 |
| 183: | | | | | | |
| Seldom, rarely flooded | Salt Meadow | 3,300 | 2,500 | 1,500 | alkali sacaton | 40 |
| | | | | | western wheatgrass | 20 |
| | | | | | switchgrass | 15 |
| | | | | | Baltic rush | 5 |
| | | | | | inland saltgrass | 5 |
| | | | | | Nebraska sedge | 5 |
| | | | | | prairie cordgrass | 5 |
| 184: | | | | | | |
| Shingle | Shaly Plains | 1,000 | 550 | 300 | alkali sacaton | 40 |
| | | | | | galleta | 25 |
| | | | | | blue grama | 20 |
| | | | | | western wheatgrass | 10 |
| | | | | | fourwing saltbush | 5 |
| | | | | | winterfat | 5 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 184: | | | | | | |
| Midway--------- | Shaly Plains | 1,000 | 550 | 300 | alkali sacaton | 40 |
| | | | | | galleta | 25 |
| | | | | | blue grama | 20 |
| | | | | | western wheatgrass | 10 |
| | | | | | fourwing saltbush | 5 |
| | | | | | winterfat | 5 |
| 185: | | | | | | |
| Shingle, moist- | Shaly Plains | 1,200 | 700 | 400 | alkali sacaton | 25 |
| | | | | | western wheatgrass | 25 |
| | | | | | blue grama | 15 |
| | | | | | sideoats grama | 15 |
| | | | | | green needlegrass | 10 |
| | | | | | fourwing saltbush | 5 |
| | | | | | winterfat | 5 |
| Midway, moist-- | Shaly Plains | 1,200 | 700 | 400 | alkali sacaton | 25 |
| | | | | | western wheatgrass | 25 |
| | | | | | blue grama | 15 |
| | | | | | sideoats grama | 15 |
| | | | | | green needlegrass | 10 |
| | | | | | fourwing saltbush | 5 |
| | | | | | winterfat | 5 |
| 186: | | | | | | |
| Sundance------- | Sandy Plains | 2,000 | 1,600 | 800 | blue grama | 25 |
| | | | | | prairie sandreed | 25 |
| | | | | | little bluestem | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | needleandthread | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | switchgrass | 5 |
| | | | | | sand dropseed | 3 |
| | | | | | sand sagebrush | 3 |
| 187: | | | | | | |
| Table Mountain, rarely flooded | Overflow | 2,600 | 1,900 | 1,100 | western wheatgrass | 35 |
| | | | | | green needlegrass | 20 |
| | | | | | switchgrass | 15 |
| | | | | | blue grama | 10 |
| | | | | | fourwing saltbush | 7 |
| | | | | | big bluestem | 5 |
| 188: | | | | | | |
| Travessilla---- | Sandstone Breaks | 1,800 | 900 | 550 | blue grama | 30 |
| | | | | | sideoats grama | 15 |
| | | | | | hairy grama | 10 |
| | | | | | little bluestem | 10 |
| | | | | | needleandthread | 7 |
| | | | | | threadleaf sedge | 5 |
| Rock outcrop. | | | | | | |
| 189: | | | | | | |
| Truckton------- | Sandy Plains | 2,100 | 1,700 | 850 | prairie sandreed | 30 |
| | | | | | blue grama | 20 |
| | | | | | needleandthread | 10 |
| | | | | | sand bluestem | 10 |
| | | | | | switchgrass | 10 |
| | | | | | little bluestem | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | thickspike wheatgrass | 5 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 190: | | | | | | |
| Truckton------- | Sandy Plains | 2,100 | 1,700 | 850 | prairie sandreed---------- | 30 |
| | | | | | blue grama---------- | 20 |
| | | | | | needleandthread---------- | 10 |
| | | | | | sand bluestem---------- | 10 |
| | | | | | switchgrass---------- | 10 |
| | | | | | little bluestem---------- | 5 |
| | | | | | sideoats grama---------- | 5 |
| | | | | | thickspike wheatgrass-------- | 5 |
| 191: | | | | | | |
| Truckton, dry-- | Sandy Plains | 1,700 | 1,050 | 550 | blue grama---------- | 40 |
| | | | | | needleandthread---------- | 15 |
| | | | | | prairie sandreed---------- | 10 |
| | | | | | thickspike wheatgrass-------- | 10 |
| | | | | | sand bluestem---------- | 5 |
| | | | | | sand dropseed---------- | 5 |
| | | | | | sideoats grama---------- | 5 |
| 192: | | | | | | |
| Truckton, dry-- | Sandy Plains | 1,700 | 1,050 | 550 | blue grama---------- | 40 |
| | | | | | needleandthread---------- | 15 |
| | | | | | prairie sandreed---------- | 10 |
| | | | | | thickspike wheatgrass-------- | 10 |
| | | | | | sand bluestem---------- | 5 |
| | | | | | sand dropseed---------- | 5 |
| | | | | | sideoats grama---------- | 5 |
| 193: | | | | | | |
| Valent--------- | Deep Sands | 1,950 | 1,450 | 850 | sand bluestem---------- | 20 |
| | | | | | prairie sandreed---------- | 15 |
| | | | | | blue grama---------- | 10 |
| | | | | | needleandthread---------- | 10 |
| | | | | | switchgrass---------- | 10 |
| | | | | | sand sagebrush---------- | 7 |
| | | | | | Indian ricegrass---------- | 5 |
| | | | | | little bluestem---------- | 5 |
| | | | | | sideoats grama---------- | 5 |
| | | | | | yellow Indiangrass---------- | 5 |
| 194: | | | | | | |
| Valent--------- | Deep Sands | 1,950 | 1,450 | 850 | sand bluestem---------- | 20 |
| | | | | | prairie sandreed---------- | 15 |
| | | | | | blue grama---------- | 10 |
| | | | | | needleandthread---------- | 10 |
| | | | | | switchgrass---------- | 10 |
| | | | | | sand sagebrush---------- | 7 |
| | | | | | Indian ricegrass---------- | 5 |
| | | | | | little bluestem---------- | 5 |
| | | | | | sideoats grama---------- | 5 |
| | | | | | yellow Indiangrass---------- | 5 |
| Bijou---------- | Sandy Plains | 1,600 | 1,000 | 500 | blue grama---------- | 45 |
| | | | | | needleandthread---------- | 10 |
| | | | | | sideoats grama---------- | 10 |
| | | | | | little bluestem---------- | 5 |
| | | | | | prairie sandreed---------- | 5 |
| | | | | | sand bluestem---------- | 5 |
| | | | | | sand dropseed---------- | 5 |
| | | | | | sun sedge---------- | 5 |
| | | | | | sand sagebrush---------- | 3 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 195: | | | | | | |
| Valent | Deep Sands | 2,450 | 1,750 | 1,150 | sand bluestem | 25 |
| | | | | | prairie sandreed | 20 |
| | | | | | switchgrass | 15 |
| | | | | | blue grama | 7 |
| | | | | | little bluestem | 5 |
| | | | | | needleandthread | 5 |
| | | | | | sand sagebrush | 5 |
| | | | | | yellow Indiangrass | 5 |
| | | | | | sand dropseed | 3 |
| Vona | Sandy Plains | 2,000 | 1,600 | 800 | blue grama | 25 |
| | | | | | prairie sandreed | 25 |
| | | | | | little bluestem | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | needleandthread | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | switchgrass | 5 |
| | | | | | sand dropseed | 3 |
| | | | | | sand sagebrush | 3 |
| 196: | | | | | | |
| Valent | Deep Sands | 1,950 | 1,450 | 850 | sand bluestem | 20 |
| | | | | | prairie sandreed | 15 |
| | | | | | blue grama | 10 |
| | | | | | needleandthread | 10 |
| | | | | | switchgrass | 10 |
| | | | | | sand sagebrush | 7 |
| | | | | | Indian ricegrass | 5 |
| | | | | | little bluestem | 5 |
| | | | | | sideoats grama | 5 |
| | | | | | yellow Indiangrass | 5 |
| Vonid | Sandy Plains | 1,600 | 1,000 | 500 | blue grama | 45 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | prairie sandreed | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sun sedge | 5 |
| | | | | | sand sagebrush | 3 |
| 197: | | | | | | |
| Vona | Sandy Plains | 2,000 | 1,600 | 800 | blue grama | 25 |
| | | | | | prairie sandreed | 25 |
| | | | | | little bluestem | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | needleandthread | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | switchgrass | 5 |
| | | | | | sand dropseed | 3 |
| | | | | | sand sagebrush | 3 |
| 198: | | | | | | |
| Vona | Sandy Plains | 2,000 | 1,600 | 800 | blue grama | 25 |
| | | | | | prairie sandreed | 25 |
| | | | | | little bluestem | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | needleandthread | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | switchgrass | 5 |
| | | | | | sand dropseed | 3 |
| | | | | | sand sagebrush | 3 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 199: | | | | | | |
| Vona | Sandy Plains | 2,000 | 1,600 | 800 | blue grama | 25 |
| | | | | | prairie sandreed | 25 |
| | | | | | little bluestem | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | needleandthread | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | switchgrass | 5 |
| | | | | | sand dropseed | 3 |
| | | | | | sand sagebrush | 3 |
| 200: | | | | | | |
| Vona | Sandy Plains | 2,000 | 1,600 | 800 | blue grama | 25 |
| | | | | | prairie sandreed | 25 |
| | | | | | little bluestem | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | needleandthread | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | switchgrass | 5 |
| | | | | | sand dropseed | 3 |
| | | | | | sand sagebrush | 3 |
| Karval | Gravel Breaks | 1,450 | 850 | 450 | blue grama | 20 |
| | | | | | little bluestem | 15 |
| | | | | | sideoats grama | 15 |
| | | | | | prairie sandreed | 10 |
| | | | | | Indian ricegrass | 5 |
| | | | | | needleandthread | 5 |
| | | | | | sand dropseed | 3 |
| Midway, moist | Shaly Plains | 1,200 | 700 | 400 | alkali sacaton | 25 |
| | | | | | western wheatgrass | 25 |
| | | | | | blue grama | 15 |
| | | | | | sideoats grama | 15 |
| | | | | | green needlegrass | 10 |
| | | | | | fourwing saltbush | 5 |
| | | | | | winterfat | 5 |
| 201: | | | | | | |
| Vona | Sandy Plains | 2,000 | 1,600 | 800 | blue grama | 25 |
| | | | | | prairie sandreed | 25 |
| | | | | | little bluestem | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | needleandthread | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | switchgrass | 5 |
| | | | | | sand dropseed | 3 |
| | | | | | sand sagebrush | 3 |
| Midway, moist | Shaly Plains | 1,200 | 700 | 400 | alkali sacaton | 25 |
| | | | | | western wheatgrass | 25 |
| | | | | | blue grama | 15 |
| | | | | | sideoats grama | 15 |
| | | | | | green needlegrass | 10 |
| | | | | | fourwing saltbush | 5 |
| | | | | | winterfat | 5 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 202: | | | | | | |
| Vona | Sandy Plains | 2,000 | 1,600 | 800 | blue grama | 25 |
| | | | | | prairie sandreed | 25 |
| | | | | | little bluestem | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | needleandthread | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | switchgrass | 5 |
| | | | | | sand dropseed | 3 |
| | | | | | sand sagebrush | 3 |
| Seldom | Wet Meadow | 3,900 | 3,200 | 2,600 | big bluestem | 30 |
| | | | | | switchgrass | 20 |
| | | | | | yellow Indiangrass | 20 |
| | | | | | sideoats grama | 10 |
| | | | | | Nebraska sedge | 7 |
| | | | | | little bluestem | 5 |
| | | | | | prairie cordgrass | 5 |
| 203: | | | | | | |
| Vonid | Sandy Plains | 1,600 | 1,000 | 500 | blue grama | 45 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | prairie sandreed | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sun sedge | 5 |
| | | | | | sand sagebrush | 3 |
| 204: | | | | | | |
| Vonid | Sandy Plains | 1,600 | 1,000 | 500 | blue grama | 45 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | prairie sandreed | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sun sedge | 5 |
| | | | | | sand sagebrush | 3 |
| 205: | | | | | | |
| Vonid | Sandy Plains | 1,600 | 1,000 | 500 | blue grama | 45 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | prairie sandreed | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sun sedge | 5 |
| | | | | | sand sagebrush | 3 |
| 206: | | | | | | |
| Vonid | Sandy Plains | 1,600 | 1,000 | 500 | blue grama | 45 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | prairie sandreed | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sun sedge | 5 |
| | | | | | sand sagebrush | 3 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 206: | | | | | | |
| Karval | Gravel Breaks | 1,400 | 800 | 400 | sideoats grama | 35 |
| | | | | | blue grama | 30 |
| | | | | | little bluestem | 15 |
| | | | | | galleta | 10 |
| | | | | | needleandthread | 5 |
| | | | | | sand dropseed | 3 |
| Midway | Shaly Plains | 1,000 | 550 | 300 | alkali sacaton | 40 |
| | | | | | galleta | 25 |
| | | | | | blue grama | 20 |
| | | | | | western wheatgrass | 10 |
| | | | | | fourwing saltbush | 5 |
| | | | | | winterfat | 5 |
| 207: | | | | | | |
| Vonid | Sandy Plains | 1,600 | 1,000 | 500 | blue grama | 45 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | prairie sandreed | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sun sedge | 5 |
| | | | | | sand sagebrush | 3 |
| Midway | Shaly Plains | 1,000 | 550 | 300 | alkali sacaton | 40 |
| | | | | | galleta | 25 |
| | | | | | blue grama | 20 |
| | | | | | western wheatgrass | 10 |
| | | | | | fourwing saltbush | 5 |
| | | | | | winterfat | 5 |
| 208: | | | | | | |
| Vonid | Sandy Plains | 1,600 | 1,000 | 500 | blue grama | 45 |
| | | | | | needleandthread | 10 |
| | | | | | sideoats grama | 10 |
| | | | | | little bluestem | 5 |
| | | | | | prairie sandreed | 5 |
| | | | | | sand bluestem | 5 |
| | | | | | sand dropseed | 5 |
| | | | | | sun sedge | 5 |
| | | | | | sand sagebrush | 3 |
| Seldom | Wet Meadow | 3,900 | 3,200 | 2,600 | big bluestem | 30 |
| | | | | | switchgrass | 20 |
| | | | | | yellow Indiangrass | 20 |
| | | | | | sideoats grama | 10 |
| | | | | | Nebraska sedge | 7 |
| | | | | | little bluestem | 5 |
| | | | | | prairie cordgrass | 5 |
| 209: | | | | | | |
| Wages | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 210: | | | | | | |
| Wages | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 211: | | | | | | |
| Wages, dry | Loamy Plains | 1,200 | 800 | 200 | blue grama | 50 |
| | | | | | western wheatgrass | 15 |
| | | | | | galleta | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | green needlegrass | 5 |
| | | | | | sand dropseed | 5 |
| 212: | | | | | | |
| Wages | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| Karval | Gravel Breaks | 1,450 | 850 | 450 | blue grama | 20 |
| | | | | | little bluestem | 15 |
| | | | | | sideoats grama | 15 |
| | | | | | prairie sandreed | 10 |
| | | | | | Indian ricegrass | 5 |
| | | | | | needleandthread | 5 |
| | | | | | sand dropseed | 3 |
| 213: | | | | | | |
| Weld | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 214: | | | | | | |
| Weld, dry | Loamy Plains | 1,200 | 800 | 200 | blue grama | 50 |
| | | | | | western wheatgrass | 20 |
| | | | | | galleta | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | winterfat | 3 |
| 215: | | | | | | |
| Wiley | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |
| 216: | | | | | | |
| Wiley | Loamy Plains | 1,600 | 1,000 | 500 | blue grama | 35 |
| | | | | | western wheatgrass | 30 |
| | | | | | green needlegrass | 15 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 5 |

Table 8.--Rangeland Productivity and Characteristic Plant Communities--Continued

| Map symbol and soil name | Ecological site | Total dry-weight production | | | Characteristic vegetation | Maximum rangeland composition |
|---|---|---|---|---|---|---|
| | | Favorable year | Normal year | Unfavorable year | | |
| | | Lb/acre | Lb/acre | Lb/acre | | Pct |
| 217: | | | | | | |
| Wilid | Loamy Plains | 1,200 | 800 | 200 | blue grama | 50 |
| | | | | | western wheatgrass | 20 |
| | | | | | galleta | 10 |
| | | | | | buffalograss | 5 |
| | | | | | fourwing saltbush | 5 |
| | | | | | needleandthread | 3 |
| 218: | | | | | | |
| Water. | | | | | | |
| 219: | | | | | | |
| Gravel pits. | | | | | | |
| 220: | | | | | | |
| Access denied. | | | | | | |

**Table 9.--Windbreaks and Environmental Plantings**

**(Absence of an entry indicates that trees generally do not grow to the given height.)**

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 101: Apishapa, rarely ponded- | Common lilac, fourwing saltbush, Rocky Mountain juniper, Siberian peashrub, skunkbush sumac | Golden willow, green ash, honeylocust, plains cottonwood | Siberian elm | --- |
| 102: Arvada | Eastern redcedar, fourwing saltbush, green ash, Rocky Mountain juniper, Siberian peashrub, skunkbush sumac | Ponderosa pine, Siberian elm | --- | --- |
| 103: Ascalon | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 104: Ascalon | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 105: Ascalon | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 106: Ascalon, dry | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 107: Ascalon, dry | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 108: Ascalon, dry | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 109: Ascalon | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 109: | | | | |
| Haxtun | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 110: | | | | |
| Ascalon, dry | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| Haxtun, dry | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 111: | | | | |
| Bacid | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 112: | | | | |
| Bankard, occasionally flooded | American plum, common chokecherry, common lilac, Nanking cherry, osageorange, Peking cotoneaster, Siberian peashrub, silver buffaloberry, skunkbush sumac, western sandcherry | Blue spruce, common hackberry, eastern redcedar, golden willow, green ash, honeylocust, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | Plains cottonwood |
| Glenberg, occasionaly flooded | American plum, common chokecherry, common lilac, Nanking cherry, osageorange, Peking cotoneaster, Siberian peashrub, silver buffaloberry, skunkbush sumac, western sandcherry | Blue spruce, common hackberry, eastern redcedar, golden willow, green ash, honeylocust, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | Plains cottonwood |
| 113: | | | | |
| Bijou | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 114: | | | | |
| Bijou, moist | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 115: | | | | |
| Bijou, moist | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 116: Blakeland | Eastern redcedar, pinyon, Rocky Mountain juniper, Siberian peashrub, Woods rose | Austrian pine, ponderosa pine | --- | --- |
| 117: Bresser | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 118: Campo | American plum, common chokecherry, common lilac, eastern redcedar, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac | Black locust, common hackberry, green ash, honeylocust, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 119: Canyon. | | | | |
| Rock outcrop. | | | | |
| 120: Colby | Common lilac, pinyon, Rocky Mountain juniper, Siberian peashrub, silver buffaloberry, skunkbush sumac | Bur oak, eastern redcedar, green ash, honeylocust, ponderosa pine | Siberian elm | --- |
| 121: Colby | Common lilac, pinyon, Rocky Mountain juniper, Siberian peashrub, silver buffaloberry, skunkbush sumac | Bur oak, eastern redcedar, green ash, honeylocust, ponderosa pine | Siberian elm | --- |
| 122: Colby | Ccommon lilac, pinyon, Rocky Mountain juniper, Siberian peashrub, silver buffaloberry, skunkbush sumac | Bur oak, eastern redcedar, green ash, honeylocust, ponderosa pine | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 122: Weld | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |
| 123: Firstview | Eastern redcedar, fourwing saltbush, green ash, Rocky Mountain juniper, Siberian peashrub, skunkbush sumac | Ponderosa pine, Siberian elm | --- | --- |
| 124: Fort Collins | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 125: Fort Collins | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 126: Fort Collins | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| Karval. | | | | |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 127: | | | | |
| Fort Collins | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| Platner | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |
| 128: | | | | |
| Fort Collins | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| Razor, moist | American plum, common chokecherry, common lilac, eastern redcedar, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac | Black locust, common hackberry, green ash, honeylocust, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 129: | | | | |
| Fort | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 130: | | | | |
| Fort | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 131: | | | | |
| Fort | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| Karval. | | | | |
| 132: | | | | |
| Fort | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| Razor | American plum, common chokecherry, common lilac, eastern redcedar, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac | Black locust, common hackberry, green ash, honeylocust, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 133: | | | | |
| Haversid, rarely flooded | Eastern redcedar, fourwing saltbush, green ash, Rocky Mountain juniper, Siberian peashrub, skunkbush sumac | Ponderosa pine, Siberian elm | --- | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 134: | | | | |
| Haverson, rarely flooded | Eastern redcedar, fourwing saltbush, green ash, Rocky Mountain juniper, Siberian peashrub, skunkbush sumac | Ponderosa pine, Siberian elm | --- | --- |
| 135: | | | | |
| Haxtun | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 136: | | | | |
| Haxtun, dry | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 137: | | | | |
| Haxtun, dry | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| Olney | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 138: | | | | |
| Haxtun | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| Olnest | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 139: | | | | |
| Keith | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 140: | | | | |
| Keith | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 141: Kim | Common lilac, pinyon, Rocky Mountain juniper, Siberian peashrub, silver buffaloberry, skunkbush sumac | Bur oak, eastern redcedar, green ash, honeylocust, ponderosa pine | Siberian elm | --- |
| 142: Kim | Common lilac, pinyon, Rocky Mountain juniper, Siberian peashrub, silver buffaloberry, skunkbush sumac | Bur oak, eastern redcedar, green ash, honeylocust, ponderosa pine | Siberian elm | --- |
| 143: Kimst | Common lilac, pinyon, Rocky Mountain juniper, Siberian peashrub, silver buffaloberry, skunkbush sumac | Bur oak, eastern redcedar, green ash, honeylocust, ponderosa pine | Siberian elm | --- |
| 144: Kimst | Common lilac, pinyon, Rocky Mountain juniper, Siberian peashrub, silver buffaloberry, skunkbush sumac | Bur oak, eastern redcedar, green ash, honeylocust, ponderosa pine | Siberian elm | --- |
| 145: Las animas, occasionally flooded | Common lilac, fourwing saltbush, Rocky Mountain juniper, Siberian peashrub, skunkbush sumac | Golden willow, green ash, honeylocust, plains cottonwood | Siberian elm | --- |
| 146: Limon, rarely flooded | Eastern redcedar, fourwing saltbush, green ash, Rocky Mountain juniper, Siberian peashrub, skunkbush sumac | Ponderosa pine, Siberian elm | --- | --- |
| 147: Limon, moist, rarely flooded | Eastern redcedar, fourwing saltbush, green ash, Rocky Mountain juniper, Siberian peashrub, skunkbush sumac | Ponderosa pine, Siberian elm | --- | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 148: Manzanola | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |
| 149: Manzanst, rarely flooded | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |
| 150: Manzanst | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |
| 151: Midway. | | | | |
| 152: Midway, moist. | | | | |
| 153: Midway. | | | | |
| Razor | American plum, common chokecherry, common lilac, eastern redcedar, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac | Black locust, common hackberry, green ash, honeylocust, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 154: Midway, moist. | | | | |
| Razor, moist | American plum, common chokecherry, common lilac, eastern redcedar, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac | Black locust, common hackberry, green ash, honeylocust, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 155: | | | | |
| Midway. | | | | |
| Rock outcrop. | | | | |
| 156: | | | | |
| Midway, moist. | | | | |
| Rock outcrop, moist. | | | | |
| 157: | | | | |
| Nunn | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |
| 158: | | | | |
| Nunn | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |
| Sampson, rarely flooded | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 159: | | | | |
| Nunn, dry | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 159: Sampson, dry, rarely flooded | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 160: Olnest | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 161: Olnest | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 162: Olnest | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 163: | | | | |
| Olnest | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 164: | | | | |
| Olney | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 165: | | | | |
| Olney | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 166: | | | | |
| Olney | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 167: | | | | |
| Olney | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 168: | | | | |
| Olney | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| Midway. | | | | |
| 169: | | | | |
| Otero | American plum, common chokecherry, common lilac, eastern redcedar, fourwing saltbush, pinyon, Rocky Mountain juniper, Siberian peashrub, silver buffaloberry, skunkbush sumac | Green ash, honeylocust, osageorange, ponderosa pine | Siberian elm | --- |
| 170: | | | | |
| Oterodry | American plum, common chokecherry, common lilac, eastern redcedar, fourwing saltbush, pinyon, Rocky Mountain juniper, Siberian peashrub, silver buffaloberry, skunkbush sumac | Green ash, honeylocust, osageorange, ponderosa pine | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 171: | | | | |
| Oterodry | American plum, common chokecherry, common lilac, eastern redcedar, fourwing saltbush, pinyon, Rocky Mountain juniper, Siberian peashrub, silver buffaloberry, skunkbush sumac | Green ash, honeylocust, osageorange, ponderosa pine | Siberian elm | --- |
| 172: | | | | |
| Platner | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |
| 173: | | | | |
| Platner | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |
| Ascalon | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 174: | | | | |
| Pleasant, rarely ponded | American plum, common chokecherry, common lilac, eastern redcedar, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac | Black locust, common hackberry, green ash, honeylocust, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 175: Rago, rarely flooded | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |
| 176: Rago, dry, rarely flooded | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |
| 177: Razor | American plum, common chokecherry, common lilac, eastern redcedar, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac | Black locust, common hackberry, green ash, honeylocust, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 178: Razor, moist | American plum, common chokecherry, common lilac, eastern redcedar, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac | Black locust, common hackberry, green ash, honeylocust, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 179: Sampson, rarely flooded | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 180:<br>Sampson, dry, rarely flooded | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 181:<br>Satanta | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 182:<br>Satanta, dry | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 183:<br>Seldom, rarely flooded | American plum, common chokecherry, common lilac, Nanking cherry, osageorange, Peking cotoneaster, Siberian peashrub, silver buffaloberry, skunkbush sumac, western sandcherry | Blue spruce, common hackberry, eastern redcedar, golden willow, green ash, honeylocust, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | Plains cottonwood |
| 184:<br>Shingle.<br><br>Midway. | | | | |
| 185:<br>Shingle, moist. | | | | |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 185: Midway, moist. | | | | |
| 186: Sundance | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 187: Table Mountain, rarely flooded | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 188: Travessilla. | | | | |
| Rock outcrop. | | | | |
| 189: Truckton | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 190: Truckton | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 191: | | | | |
| Truckton, dry | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 192: | | | | |
| Truckton, dry | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 193: | | | | |
| Valent | Eastern redcedar, pinyon, Rocky Mountain juniper, Siberian peashrub, Woods rose | Austrian pine, ponderosa pine | --- | --- |
| 194: | | | | |
| Valent | Eastern redcedar, pinyon, Rocky Mountain juniper, Siberian peashrub, Woods rose | Austrian pine, ponderosa pine | --- | --- |
| Bijou | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 195: | | | | |
| Valent | Eastern redcedar, pinyon, Rocky Mountain juniper, Siberian peashrub, Woods rose | Austrian pine, ponderosa pine | --- | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 195: | | | | |
| Vona | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 196: | | | | |
| Valent | Eastern redcedar, pinyon, Rocky Mountain juniper, Siberian peashrub, Woods rose | Austrian pine, ponderosa pine | --- | --- |
| Vonid | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 197: | | | | |
| Vona | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 198: | | | | |
| Vona | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 199: | | | | |
| Vona | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush, sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 200: | | | | |
| Vona | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush, sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| Karval. | | | | |
| Midway. | | | | |
| 201: | | | | |
| Vona | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush, sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| Midway, moist. | | | | |
| 202: | | | | |
| Vona | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush, sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 202: Seldom | American plum, common chokecherry, common lilac, Nanking cherry, osageorange, Peking cotoneaster, Siberian peashrub, silver buffaloberry, skunkbush sumac, western sandcherry | Blue spruce, common hackberry, eastern redcedar, golden willow, green ash, honeylocust, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | Plains cottonwood |
| 203: Vonid | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 204: Vonid | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 205: Vonid | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| 206: Vonid | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 206: Karval. | | | | |
| Midway. | | | | |
| 207: Vonid | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| Midway. | | | | |
| 208: Vonid | American plum, common chokecherry, common lilac, Peking cotoneaster, pinyon, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, bur oak, common hackberry, Douglas fir, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper | Siberian elm | --- |
| Seldom | American plum, common chokecherry, common lilac, Nanking cherry, osageorange, Peking cotoneaster, Siberian peashrub, silver buffaloberry, skunkbush sumac, western sandcherry | Blue spruce, common hackberry, eastern redcedar, golden willow, green ash, honeylocust, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | Plains cottonwood |
| 209: Wages | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 210: | | | | |
| Wages | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 211: | | | | |
| Wages, dry | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| 212: | | | | |
| Wages | American plum, common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Austrian pine, black locust, blue spruce, bur oak, common hackberry, eastern redcedar, green ash, osageorange, pinyon, ponderosa pine, Rocky Mountain juniper, Russian mulberry, Scotch pine, white fir | Siberian elm | --- |
| Karval. | | | | |
| 213: | | | | |
| Weld | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |

Table 9.--Windbreaks and Environmental Plantings--Continued

| Map symbol and soil name | Trees having predicted 20-year average height, in feet, of-- | | | |
|---|---|---|---|---|
| | <8 | 8-15 | 16-25 | 26-35 |
| 214: Weld, dry | Common chokecherry, common lilac, fourwing saltbush, Nanking cherry, Peking cotoneaster, Siberian peashrub, skunkbush sumac, western sandcherry | Common hackberry, eastern redcedar, green ash, honeylocust, osageorange, ponderosa pine, Rocky Mountain juniper, Russian mulberry | Siberian elm | --- |
| 215: Wiley | Common lilac, pinyon, Rocky Mountain juniper, Siberian peashrub, silver buffaloberry, skunkbush sumac | Bur oak, eastern redcedar, green ash, honeylocust, ponderosa pine | Siberian elm | --- |
| 216: Wiley | Common lilac, pinyon, Rocky Mountain juniper, Siberian peashrub, silver buffaloberry, skunkbush sumac | Bur oak, eastern redcedar, green ash, honeylocust, ponderosa pine | Siberian elm | --- |
| 217: Wilid | Common lilac, pinyon, Rocky Mountain juniper, Siberian peashrub, silver buffaloberry, skunkbush sumac | Bur oak, eastern redcedar, green ash, honeylocust, ponderosa pine | Siberian elm | --- |
| 218: Water. | | | | |
| 219: Gravel pits. | | | | |
| 220: Access denied. | | | | |

Table 10a.--Recreation

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 101: Apishapa, rarely ponded | 90 | Very limited: Depth to saturated zone; Restricted permeability | 1.00; 0.94 | Very limited: Depth to saturated zone; Restricted permeability | 1.00; 0.94 | Very limited: Depth to saturated zone; Restricted permeability; Slope | 1.00; 0.94; 0.05 |
| 102: Arvada | 85 | Very limited: Sodium content; Restricted permeability | 1.00; 0.94 | Very limited: Sodium content; Restricted permeability | 1.00; 0.94 | Very limited: Sodium content; Restricted permeability; Slope | 1.00; 0.94; 0.21 |
| 103: Ascalon | 85 | Not limited | | Not limited | | Somewhat limited: Slope | 0.05 |
| 104: Ascalon | 85 | Not limited | | Not limited | | Somewhat limited: Slope | 0.48 |
| 105: Ascalon | 85 | Not limited | | Not limited | | Very limited: Slope | 1.00 |
| 106: Ascalon, dry | 85 | Not limited | | Not limited | | Somewhat limited: Slope | 0.05 |
| 107: Ascalon, dry | 85 | Not limited | | Not limited | | Somewhat limited: Slope | 0.48 |
| 108: Ascalon, dry | 85 | Not limited | | Not limited | | Very limited: Slope | 1.00 |
| 109: Ascalon | 55 | Not limited | | Not limited | | Somewhat limited: Slope | 0.05 |
| Haxtun | 30 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy; Slope | 0.28; 0.05 |
| 110: Ascalon, dry | 55 | Not limited | | Not limited | | Somewhat limited: Slope | 0.05 |
| Haxtun, dry | 30 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy; Slope | 0.28; 0.05 |

Table 10a.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 111: | | | | | | | |
| Bacid | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | Restricted permeability | 0.05 | Restricted permeability | 0.05 | Restricted permeability | 0.05 |
| 112: | | | | | | | |
| Bankard, occasionally flooded | 55 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Flooding | 1.00 | Too sandy | 0.28 | Flooding | 0.60 |
| | | Too sandy | 0.28 | | | Too sandy | 0.28 |
| | | | | | | Slope | 0.05 |
| Glenberg, occasionally flooded | 30 | Very limited: | | Not limited | | Somewhat limited: | |
| | | Flooding | 1.00 | | | Flooding | 0.60 |
| | | | | | | Slope | 0.05 |
| 113: | | | | | | | |
| Bijou | 90 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Too sandy | 0.28 |
| | | | | | | Slope | 0.05 |
| 114: | | | | | | | |
| Bijou, moist | 90 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Too sandy | 0.28 |
| | | | | | | Slope | 0.05 |
| 115: | | | | | | | |
| Bijou, moist | 90 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Slope | 1.00 |
| | | | | | | Too sandy | 0.28 |
| 116: | | | | | | | |
| Blakeland | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Too sandy | 0.12 | Too sandy | 0.12 | Slope | 1.00 |
| | | | | | | Too sandy | 0.12 |
| 117: | | | | | | | |
| Bresser | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.21 |
| 118: | | | | | | | |
| Campo | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 0.60 | Restricted permeability | 0.60 | Restricted permeability | 0.60 |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| 119: | | | | | | | |
| Canyon | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Slope | 1.00 | Depth to bedrock | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Slope | 1.00 |
| | | Dusty | 0.50 | Dusty | 0.50 | Gravel content | 1.00 |
| | | Gravel content | 0.09 | Gravel content | 0.09 | Dusty | 0.50 |
| | | | | | | Content of large stones | 0.20 |
| Rock outcrop | 35 | Not rated | | Not rated | | Not rated | |

Table 10a.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 120: | | | | | | | |
| Colby | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.05 |
| 121: | | | | | | | |
| Colby | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Slope | 1.00 |
| | | | | | | Dusty | 0.50 |
| 122: | | | | | | | |
| Colby | 50 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.21 |
| Weld | 40 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.21 |
| 123: | | | | | | | |
| Firstview | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Sodium content | 1.00 | Sodium content | 1.00 | Sodium content | 1.00 |
| | | Restricted permeability | 0.39 | Restricted permeability | 0.39 | Restricted permeability | 0.39 |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Too sandy | 0.28 |
| | | | | | | Slope | 0.05 |
| 124: | | | | | | | |
| Fort Collins | 90 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.05 |
| 125: | | | | | | | |
| Fort Collins | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.48 |
| 126: | | | | | | | |
| Fort Collins | 55 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Slope | 1.00 |
| | | | | | | Dusty | 0.50 |
| Karval | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Slope | 1.00 | Slope | 1.00 |
| | | Gravel content | 0.32 | Gravel content | 0.32 | Gravel content | 1.00 |
| 127: | | | | | | | |
| Fort Collins | 50 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.21 |
| Platner | 35 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.21 |
| 128: | | | | | | | |
| Fort Collins | 50 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Slope | 1.00 |
| | | | | | | Dusty | 0.50 |

Table 10a.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 128: | | | | | | | |
| Razor, moist | 40 | Very limited: | | Very limited: | | Very limited: | |
| | | Sodium content | 1.00 | Sodium content | 1.00 | Slope | 1.00 |
| | | Restricted permeability | 0.45 | Restricted permeability | 0.45 | Sodium content | 1.00 |
| | | Slope | 0.16 | Slope | 0.16 | Restricted permeability | 0.45 |
| | | | | | | Depth to bedrock | 0.42 |
| 129: | | | | | | | |
| Fort | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | Restricted permeability | 0.05 | Restricted permeability | 0.05 | Restricted permeability | 0.05 |
| | | | | | | Slope | 0.05 |
| 130: | | | | | | | |
| Fort | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | Restricted permeability | 0.05 | Restricted permeability | 0.05 | Slope | 0.48 |
| | | | | | | Restricted permeability | 0.05 |
| 131: | | | | | | | |
| Fort | 55 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Slope | 1.00 |
| | | Restricted permeability | 0.05 | Restricted permeability | 0.05 | Dusty | 0.50 |
| | | | | | | Restricted permeability | 0.05 |
| Karval | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Slope | 1.00 | Slope | 1.00 |
| | | Gravel content | 0.32 | Gravel content | 0.32 | Gravel content | 1.00 |
| 132: | | | | | | | |
| Fort | 50 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Slope | 1.00 |
| | | Restricted permeability | 0.05 | Restricted permeability | 0.05 | Dusty | 0.50 |
| | | | | | | Restricted permeability | 0.05 |
| Razor | 40 | Very limited: | | Very limited: | | Very limited: | |
| | | Sodium content | 1.00 | Sodium content | 1.00 | Slope | 1.00 |
| | | Restricted permeability | 0.45 | Restricted permeability | 0.45 | Sodium content | 1.00 |
| | | Slope | 0.16 | Slope | 0.16 | Restricted permeability | 0.45 |
| | | | | | | Depth to bedrock | 0.42 |
| 133: | | | | | | | |
| Haversid, rarely flooded | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Flooding | 1.00 | Dusty | 0.50 | Dusty | 0.50 |
| | | Dusty | 0.50 | | | Slope | 0.05 |
| 134: | | | | | | | |
| Haverson, rarely flooded | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Flooding | 1.00 | Dusty | 0.50 | Dusty | 0.50 |
| | | Dusty | 0.50 | Restricted permeability | 0.05 | Restricted permeability | 0.05 |
| | | Restricted permeability | 0.05 | | | Slope | 0.05 |

Table 10a.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 135: | | | | | | | |
| Haxtun | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Too sandy | 0.28 |
| | | | | | | Slope | 0.05 |
| 136: | | | | | | | |
| Haxtun, dry | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Too sandy | 0.28 |
| | | | | | | Slope | 0.05 |
| 137: | | | | | | | |
| Haxtun, dry | 55 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Too sandy | 0.28 |
| | | | | | | Slope | 0.05 |
| Olney | 30 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Too sandy | 0.28 |
| | | | | | | Slope | 0.05 |
| 138: | | | | | | | |
| Haxtun | 55 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Too sandy | 0.28 |
| | | | | | | Slope | 0.05 |
| Olnest | 30 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Too sandy | 0.28 |
| | | | | | | Slope | 0.05 |
| 139: | | | | | | | |
| Keith | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.05 |
| 140: | | | | | | | |
| Keith | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Slope | 1.00 |
| | | | | | | Dusty | 0.50 |
| 141: | | | | | | | |
| Kim | 90 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.05 |
| 142: | | | | | | | |
| Kim | 90 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Slope | 1.00 |
| | | | | | | Dusty | 0.50 |
| 143: | | | | | | | |
| Kimst | 90 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | Restricted permeability | 0.05 | Restricted permeability | 0.05 | Restricted permeability | 0.05 |
| | | | | | | Slope | 0.05 |
| 144: | | | | | | | |
| Kimst | 90 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Slope | 1.00 |
| | | Restricted permeability | 0.05 | Restricted permeability | 0.05 | Dusty | 0.50 |
| | | | | | | Restricted permeability | 0.05 |

Table 10a.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 145: Las Animas, occasionally flooded | 85 | Very limited: Flooding<br>Depth to saturated zone | 1.00<br>0.44 | Somewhat limited: Depth to saturated zone | 0.19 | Somewhat limited: Flooding<br>Depth to saturated zone<br>Slope | 0.60<br>0.44<br>0.05 |
| 146: Limon, rarely flooded | 85 | Very limited: Flooding<br>Too clayey<br>Restricted permeability<br>Salinity | 1.00<br>0.50<br>0.39<br>0.13 | Somewhat limited: Too clayey<br>Restricted permeability<br>Salinity | 0.50<br>0.39<br>0.13 | Somewhat limited: Too clayey<br>Restricted permeability<br>Salinity<br>Slope | 0.50<br>0.39<br>0.13<br>0.05 |
| 147: Limon, moist, rarely flooded | 85 | Very limited: Flooding<br>Too clayey<br>Restricted permeability<br>Salinity | 1.00<br>0.50<br>0.39<br>0.13 | Somewhat limited: Too clayey<br>Restricted permeability<br>Salinity | 0.50<br>0.39<br>0.13 | Somewhat limited: Too clayey<br>Restricted permeability<br>Salinity<br>Slope | 0.50<br>0.39<br>0.13<br>0.05 |
| 148: Manzanola | 85 | Somewhat limited: Restricted permeability | 0.05 | Somewhat limited: Restricted permeability | 0.05 | Somewhat limited: Slope<br>Restricted permeability | 0.21<br>0.05 |
| 149: Manzanst, rarely flooded | 90 | Very limited: Flooding<br>Restricted permeability | 1.00<br>0.45 | Somewhat limited: Restricted permeability | 0.45 | Somewhat limited: Restricted permeability<br>Slope | 0.45<br>0.05 |
| 150: Manzanst | 85 | Somewhat limited: Restricted permeability | 0.05 | Somewhat limited: Restricted permeability | 0.05 | Somewhat limited: Slope<br>Restricted permeability | 0.21<br>0.05 |
| 151: Midway | 85 | Very limited: Depth to bedrock<br>Restricted permeability | 1.00<br>0.44 | Very limited: Depth to bedrock<br>Restricted permeability | 1.00<br>0.44 | Very limited: Depth to bedrock<br>Restricted permeability<br>Slope | 1.00<br>0.44<br>0.21 |
| 152: Midway, moist | 85 | Very limited: Depth to bedrock<br>Restricted permeability | 1.00<br>0.44 | Very limited: Depth to bedrock<br>Restricted permeability | 1.00<br>0.44 | Very limited: Depth to bedrock<br>Restricted permeability<br>Slope | 1.00<br>0.44<br>0.21 |

Table 10a.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 153: | | | | | | | |
| Midway | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Restricted permeability | 0.44 | Restricted permeability | 0.44 | Slope | 1.00 |
| | | Slope | 0.16 | Slope | 0.16 | Restricted permeability | 0.44 |
| Razor | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Sodium content | 1.00 | Sodium content | 1.00 | Slope | 1.00 |
| | | Restricted permeability | 0.45 | Restricted permeability | 0.45 | Sodium content | 1.00 |
| | | Slope | 0.16 | Slope | 0.16 | Restricted permeability | 0.45 |
| | | | | | | Depth to bedrock | 0.42 |
| 154: | | | | | | | |
| Midway, moist | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Restricted permeability | 0.44 | Restricted permeability | 0.44 | Slope | 1.00 |
| | | Slope | 0.16 | Slope | 0.16 | Restricted permeability | 0.44 |
| Razor, moist | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Sodium content | 1.00 | Sodium content | 1.00 | Slope | 1.00 |
| | | Restricted permeability | 0.45 | Restricted permeability | 0.45 | Sodium content | 1.00 |
| | | Slope | 0.16 | Slope | 0.16 | Restricted permeability | 0.45 |
| | | | | | | Depth to bedrock | 0.42 |
| 155: | | | | | | | |
| Midway | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Slope | 1.00 | Depth to bedrock | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Slope | 1.00 |
| | | Restricted permeability | 0.44 | Restricted permeability | 0.44 | Restricted permeability | 0.44 |
| Rock outcrop | 30 | Not rated | | Not rated | | Not rated | |
| 156: | | | | | | | |
| Midway, moist | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Slope | 1.00 | Depth to bedrock | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Slope | 1.00 |
| | | Restricted permeability | 0.44 | Restricted permeability | 0.44 | Restricted permeability | 0.44 |
| Rock outcrop, moist | 30 | Not rated | | Not rated | | Not rated | |
| 157: | | | | | | | |
| Nunn | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.48 |
| 158: | | | | | | | |
| Nunn | 55 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.05 |
| Sampson, rarely flooded | 30 | Very limited: | | Not limited | | Somewhat limited: | |
| | | Flooding | 1.00 | | | Slope | 0.05 |
| 159: | | | | | | | |
| Nunn, dry | 50 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.05 |

Table 10a.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 159: | | | | | | | |
| Sampson, dry, rarely flooded | 35 | Very limited: Flooding | 1.00 | Not limited | | Somewhat limited: Slope | 0.05 |
| 160: | | | | | | | |
| Olnest | 85 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy<br>Slope | 0.28<br>0.21 |
| 161: | | | | | | | |
| Olnest | 85 | Not limited | | Not limited | | Somewhat limited: Slope | 0.05 |
| 162: | | | | | | | |
| Olnest | 85 | Not limited | | Not limited | | Somewhat limited: Slope | 0.48 |
| 163: | | | | | | | |
| Olnest | 90 | Somewhat limited: Slope | 0.04 | Somewhat limited: Slope | 0.04 | Very limited: Slope | 1.00 |
| 164: | | | | | | | |
| Olney | 85 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy<br>Slope | 0.28<br>0.21 |
| 165: | | | | | | | |
| Olney | 85 | Not limited | | Not limited | | Somewhat limited: Slope | 0.05 |
| 166: | | | | | | | |
| Olney | 85 | Not limited | | Not limited | | Somewhat limited: Slope | 0.48 |
| 167: | | | | | | | |
| Olney | 90 | Somewhat limited: Slope | 0.04 | Somewhat limited: Slope | 0.04 | Very limited: Slope | 1.00 |
| 168: | | | | | | | |
| Olney | 55 | Not limited | | Not limited | | Very limited: Slope | 1.00 |
| Midway | 30 | Very limited: Depth to bedrock<br>Restricted permeability | 1.00<br>0.44 | Very limited: Depth to bedrock<br>Restricted permeability | 1.00<br>0.44 | Very limited: Depth to bedrock<br>Slope<br>Restricted permeability | 1.00<br>1.00<br>0.44 |
| 169: | | | | | | | |
| Otero | 85 | Not limited | | Not limited | | Somewhat limited: Slope | 0.21 |
| 170: | | | | | | | |
| Oterodry | 85 | Not limited | | Not limited | | Somewhat limited: Slope | 0.21 |
| 171: | | | | | | | |
| Oterodry | 85 | Not limited | | Not limited | | Very limited: Slope | 1.00 |

Table 10a.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 172: | | | | | | | |
| Platner | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.05 |
| 173: | | | | | | | |
| Platner | 50 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.05 |
| Ascalon | 35 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.05 |
| 174: | | | | | | | |
| Pleasant, rarely ponded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| 175: | | | | | | | |
| Rago, rarely flooded | 90 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Flooding | 1.00 | Restricted permeability | 0.05 | Restricted permeability | 0.05 |
| | | Restricted permeability | 0.05 | | | | |
| 176: | | | | | | | |
| Rago, dry, rarely flooded | 90 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Flooding | 1.00 | Restricted permeability | 0.05 | Restricted permeability | 0.05 |
| | | Restricted permeability | 0.05 | | | | |
| 177: | | | | | | | |
| Razor | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Sodium content | 1.00 | Sodium content | 1.00 | Sodium content | 1.00 |
| | | Restricted permeability | 0.45 | Restricted permeability | 0.45 | Restricted permeability | 0.45 |
| | | | | | | Depth to bedrock | 0.42 |
| | | | | | | Slope | 0.21 |
| 178: | | | | | | | |
| Razor, moist | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Sodium content | 1.00 | Sodium content | 1.00 | Sodium content | 1.00 |
| | | Restricted permeability | 0.45 | Restricted permeability | 0.45 | Restricted permeability | 0.45 |
| | | | | | | Depth to bedrock | 0.42 |
| | | | | | | Slope | 0.21 |
| 179: | | | | | | | |
| Sampson, rarely flooded | 90 | Very limited: | | Not limited | | Not limited | |
| | | Flooding | 1.00 | | | | |
| 180: | | | | | | | |
| Sampson, dry, rarely flooded | 90 | Very limited: | | Not limited | | Not limited | |
| | | Flooding | 1.00 | | | | |

Table 10a.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 181: | | | | | | | |
| Satanta | 90 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.05 |
| 182: | | | | | | | |
| Satanta, dry | 90 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.05 |
| 183: | | | | | | | |
| Seldom, rarely flooded | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Depth to saturated zone | 1.00 | | | Slope | 0.05 |
| 184: | | | | | | | |
| Shingle | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Restricted permeability | 0.05 | Restricted permeability | 0.05 | Slope | 0.77 |
| | | | | | | Restricted permeability | 0.05 |
| Midway | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Restricted permeability | 0.44 | Restricted permeability | 0.44 | Slope | 0.77 |
| | | | | | | Restricted permeability | 0.44 |
| 185: | | | | | | | |
| Shingle, moist | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Restricted permeability | 0.05 | Restricted permeability | 0.05 | Slope | 0.77 |
| | | | | | | Restricted permeability | 0.05 |
| Midway, moist | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Restricted permeability | 0.44 | Restricted permeability | 0.44 | Slope | 0.77 |
| | | | | | | Restricted permeability | 0.44 |
| 186: | | | | | | | |
| Sundance | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Too sandy | 0.12 | Too sandy | 0.12 | Too sandy | 0.12 |
| | | | | | | Slope | 0.05 |
| 187: | | | | | | | |
| Table Mountain, rarely flooded | 85 | Very limited: | | Not limited | | Not limited | |
| | | Flooding | 1.00 | | | | |
| 188: | | | | | | | |
| Travessilla | 60 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Slope | 1.00 | Depth to bedrock | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Slope | 1.00 |
| | | | | | | Content of large stones | 0.08 |
| Rock outcrop | 25 | Not rated | | Not rated | | Not rated | |

Table 10a.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 189: | | | | | | | |
| Truckton | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.21 |
| 190: | | | | | | | |
| Truckton | 85 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| 191: | | | | | | | |
| Truckton, dry | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.21 |
| 192: | | | | | | | |
| Truckton, dry | 85 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| 193: | | | | | | | |
| Valent | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Too sandy | 1.00 | Too sandy | 1.00 | Too sandy | 1.00 |
| | | Slope | 0.63 | Slope | 0.63 | Slope | 1.00 |
| 194: | | | | | | | |
| Valent | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Too sandy | 1.00 | Too sandy | 1.00 | Too sandy | 1.00 |
| | | | | | | Slope | 1.00 |
| Bijou | 30 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Slope | 1.00 |
| | | | | | | Too sandy | 0.28 |
| 195: | | | | | | | |
| Valent | 60 | Very limited: | | Very limited: | | Very limited: | |
| | | Too sandy | 1.00 | Too sandy | 1.00 | Too sandy | 1.00 |
| | | Slope | 0.96 | Slope | 0.96 | Slope | 1.00 |
| Vona | 30 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Slope | 1.00 |
| | | Slope | 0.04 | Slope | 0.04 | Too sandy | 0.28 |
| 196: | | | | | | | |
| Valent | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Too sandy | 1.00 | Too sandy | 1.00 | Too sandy | 1.00 |
| | | Slope | 0.96 | Slope | 0.96 | Slope | 1.00 |
| Vonid | 35 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Slope | 1.00 |
| | | Slope | 0.04 | Slope | 0.04 | Too sandy | 0.28 |
| 197: | | | | | | | |
| Vona | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Slope | 0.77 |
| | | | | | | Too sandy | 0.28 |
| 198: | | | | | | | |
| Vona | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.21 |
| 199: | | | | | | | |
| Vona | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 0.04 | Slope | 0.04 | Slope | 1.00 |

Table 10a.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 200: | | | | | | | |
| Vona | 35 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| Karval | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Slope | 1.00 | Slope | 1.00 |
| | | Gravel content | 0.32 | Gravel content | 0.32 | Gravel content | 1.00 |
| Midway, moist | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Slope | 1.00 | Slope | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Restricted permeability | 0.44 | Restricted permeability | 0.44 | Restricted permeability | 0.44 |
| 201: | | | | | | | |
| Vona | 55 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| Midway, moist | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Restricted permeability | 0.44 | Restricted permeability | 0.44 | Slope | 1.00 |
| | | | | | | Restricted permeability | 0.44 |
| 202: | | | | | | | |
| Vona | 60 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 0.96 | Slope | 0.96 | Slope | 1.00 |
| Seldom | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Slope | 0.96 | Slope | 0.96 | Slope | 1.00 |
| 203: | | | | | | | |
| Vonid | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | Slope | 0.77 |
| | | | | | | Too sandy | 0.28 |
| 204: | | | | | | | |
| Vonid | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.21 |
| 205: | | | | | | | |
| Vonid | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 0.04 | Slope | 0.04 | Slope | 1.00 |
| 206: | | | | | | | |
| Vonid | 35 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| Karval | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Slope | 1.00 | Slope | 1.00 |
| | | Gravel content | 0.32 | Gravel content | 0.32 | Gravel content | 1.00 |
| Midway | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Slope | 1.00 | Slope | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Restricted permeability | 0.44 | Restricted permeability | 0.44 | Restricted permeability | 0.44 |

Table 10a.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 207: | | | | | | | |
| Vonid | 55 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| Midway | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Restricted permeability | 0.44 | Restricted permeability | 0.44 | Slope | 1.00 |
| | | | | | | Restricted permeability | 0.44 |
| 208: | | | | | | | |
| Vonid | 65 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 0.96 | Slope | 0.96 | Slope | 1.00 |
| Seldom | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Slope | 0.96 | Slope | 0.96 | Slope | 1.00 |
| 209: | | | | | | | |
| Wages | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.48 |
| 210: | | | | | | | |
| Wages | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Slope | 1.00 |
| | | Slope | 0.04 | Slope | 0.04 | Dusty | 0.50 |
| 211: | | | | | | | |
| Wages, dry | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.21 |
| 212: | | | | | | | |
| Wages | 60 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Slope | 1.00 |
| | | Slope | 0.37 | Slope | 0.37 | Dusty | 0.50 |
| Karval | 25 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 0.37 | Slope | 0.37 | Slope | 1.00 |
| | | Gravel content | 0.32 | Gravel content | 0.32 | Gravel content | 1.00 |
| 213: | | | | | | | |
| Weld | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| 214: | | | | | | | |
| Weld, dry | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| 215: | | | | | | | |
| Wiley | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Dusty | 0.50 |
| | | | | | | Slope | 0.05 |
| 216: | | | | | | | |
| Wiley | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Slope | 1.00 |
| | | | | | | Dusty | 0.50 |

Table 10a.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Camp areas | | Picnic areas | | Playgrounds | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 217: | | | | | | | |
| Wilid | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty<br>Slope | 0.50<br>0.05 |
| 218: | | | | | | | |
| Water | 90 | Not rated | | Not rated | | Not rated | |
| 219: | | | | | | | |
| Gravel pits | 100 | Not rated | | Not rated | | Not rated | |
| 220: | | | | | | | |
| Access denied | 100 | Not rated | | Not rated | | Not rated | |

Table 10b.--Recreation

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

| Map symbol and soil name | Pct. of map unit | Paths and trails | | Off-road motorcycle trails | | Golf fairways | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 101: Apishapa, rarely ponded | 90 | Very limited: Depth to saturated zone | 1.00 | Very limited: Depth to saturated zone | 1.00 | Very limited: Depth to saturated zone | 1.00 |
| 102: Arvada | 85 | Not limited | | Not limited | | Very limited: Sodium content | 1.00 |
| 103: Ascalon | 85 | Not limited | | Not limited | | Not limited | |
| 104: Ascalon | 85 | Not limited | | Not limited | | Not limited | |
| 105: Ascalon | 85 | Not limited | | Not limited | | Not limited | |
| 106: Ascalon, dry | 85 | Not limited | | Not limited | | Not limited | |
| 107: Ascalon, dry | 85 | Not limited | | Not limited | | Not limited | |
| 108: Ascalon, dry | 85 | Not limited | | Not limited | | Not limited | |
| 109: Ascalon | 55 | Not limited | | Not limited | | Not limited | |
| Haxtun | 30 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| 110: Ascalon, dry | 55 | Not limited | | Not limited | | Not limited | |
| Haxtun, dry | 30 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| 111: Bacid | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 112: Bankard, occasionally flooded | 55 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Droughty<br>Flooding | 0.90<br>0.60 |
| Glenberg, occasionally flooded | 30 | Not limited | | Not limited | | Somewhat limited: Flooding | 0.60 |

Table 10b.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Paths and trails | | Off-road motorcycle trails | | Golf fairways | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 113: | | | | | | | |
| Bijou | 90 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| 114: | | | | | | | |
| Bijou, moist | 90 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| 115: | | | | | | | |
| Bijou, moist | 90 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| 116: | | | | | | | |
| Blakeland | 85 | Somewhat limited: Too sandy | 0.12 | Somewhat limited: Too sandy | 0.12 | Somewhat limited: Droughty | 0.69 |
| 117: | | | | | | | |
| Bresser | 85 | Not limited | | Not limited | | Somewhat limited: Droughty | 0.10 |
| 118: | | | | | | | |
| Campo | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 119: | | | | | | | |
| Canyon | 55 | Very limited: Slope<br>Dusty | 1.00<br>0.50 | Somewhat limited: Slope<br>Dusty | 0.56<br>0.50 | Very limited: Droughty<br>Depth to bedrock<br>Slope<br>Content of large stones<br>Gravel content | 1.00<br>1.00<br>1.00<br>0.20<br>0.09 |
| Rock outcrop | 35 | Not rated | | Not rated | | Not rated | |
| 120: | | | | | | | |
| Colby | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 121: | | | | | | | |
| Colby | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 122: | | | | | | | |
| Colby | 50 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| Weld | 40 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 123: | | | | | | | |
| Firstview | 85 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Very limited: Sodium content | 1.00 |
| 124: | | | | | | | |
| Fort Collins | 90 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 125: | | | | | | | |
| Fort Collins | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |

Table 10b.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Paths and trails | | Off-road motorcycle trails | | Golf fairways | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 126: | | | | | | | |
| Fort Collins | 55 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| Karval | 35 | Somewhat limited: Slope | 0.18 | Not limited | | Very limited: Droughty | 1.00 |
| | | | | | | Slope | 1.00 |
| | | | | | | Gravel content | 0.32 |
| 127: | | | | | | | |
| Fort Collins | 50 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| Platner | 35 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 128: | | | | | | | |
| Fort Collins | 50 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| Razor, moist | 40 | Not limited | | Not limited | | Very limited: Sodium content | 1.00 |
| | | | | | | Depth to bedrock | 0.42 |
| | | | | | | Slope | 0.16 |
| 129: | | | | | | | |
| Fort | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 130: | | | | | | | |
| Fort | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 131: | | | | | | | |
| Fort | 55 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| Karval | 35 | Somewhat limited: Slope | 0.18 | Not limited | | Very limited: Droughty | 1.00 |
| | | | | | | Slope | 1.00 |
| | | | | | | Gravel content | 0.32 |
| 132: | | | | | | | |
| Fort | 50 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| Razor | 40 | Not limited | | Not limited | | Very limited: Sodium content | 1.00 |
| | | | | | | Depth to bedrock | 0.42 |
| | | | | | | Slope | 0.16 |
| 133: | | | | | | | |
| Haversid, rarely flooded | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 134: | | | | | | | |
| Haverson, rarely flooded | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |

Table 10b.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Paths and trails | | Off-road motorcycle trails | | Golf fairways | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 135: | | | | | | | |
| Haxtun | 85 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| 136: | | | | | | | |
| Haxtun, dry | 85 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| 137: | | | | | | | |
| Haxtun, dry | 55 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| Olney | 30 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| 138: | | | | | | | |
| Haxtun | 55 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| Olnest | 30 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| 139: | | | | | | | |
| Keith | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 140: | | | | | | | |
| Keith | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 141: | | | | | | | |
| Kim | 90 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 142: | | | | | | | |
| Kim | 90 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 143: | | | | | | | |
| Kimst | 90 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 144: | | | | | | | |
| Kimst | 90 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 145: | | | | | | | |
| Las Animas, occasionally flooded | 85 | Not limited | | Not limited | | Somewhat limited: Flooding<br>Depth to saturated zone | 0.60<br>0.19 |
| 146: | | | | | | | |
| Limon, rarely flooded | 85 | Somewhat limited: Too clayey | 0.50 | Somewhat limited: Too clayey | 0.50 | Very limited: Too clayey<br>Salinity | 1.00<br>0.13 |

Table 10b.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Paths and trails | | Off-road motorcycle trails | | Golf fairways | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 147: | | | | | | | |
| Limon, moist, rarely flooded | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Too clayey | 0.50 | Too clayey | 0.50 | Too clayey | 1.00 |
| | | | | | | Salinity | 0.13 |
| 148: | | | | | | | |
| Manzanola | 85 | Not limited | | Not limited | | Not limited | |
| 149: | | | | | | | |
| Manzanst, rarely flooded | 90 | Not limited | | Not limited | | Not limited | |
| 150: | | | | | | | |
| Manzanst | 85 | Not limited | | Not limited | | Not limited | |
| 151: | | | | | | | |
| Midway | 85 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Depth to bedrock | 1.00 |
| | | | | | | Droughty | 0.92 |
| 152: | | | | | | | |
| Midway, moist | 85 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Depth to bedrock | 1.00 |
| | | | | | | Droughty | 0.92 |
| 153: | | | | | | | |
| Midway | 55 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Depth to bedrock | 1.00 |
| | | | | | | Droughty | 0.92 |
| | | | | | | Slope | 0.16 |
| Razor | 30 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Sodium content | 1.00 |
| | | | | | | Depth to bedrock | 0.42 |
| | | | | | | Slope | 0.16 |
| 154: | | | | | | | |
| Midway, moist | 55 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Depth to bedrock | 1.00 |
| | | | | | | Droughty | 0.92 |
| | | | | | | Slope | 0.16 |
| Razor, moist | 30 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Sodium content | 1.00 |
| | | | | | | Depth to bedrock | 0.42 |
| | | | | | | Slope | 0.16 |
| 155: | | | | | | | |
| Midway | 55 | Somewhat limited: | | Not limited | | Very limited: | |
| | | Slope | 0.92 | | | Depth to bedrock | 1.00 |
| | | | | | | Slope | 1.00 |
| | | | | | | Droughty | 0.92 |
| Rock outcrop | 30 | Not rated | | Not rated | | Not rated | |
| 156: | | | | | | | |
| Midway, moist | 55 | Somewhat limited: | | Not limited | | Very limited: | |
| | | Slope | 0.92 | | | Depth to bedrock | 1.00 |
| | | | | | | Slope | 1.00 |
| | | | | | | Droughty | 0.92 |

Table 10b.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Paths and trails | | Off-road motorcycle trails | | Golf fairways | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 156: | | | | | | | |
| Rock outcrop, moist- | 30 | Not rated | | Not rated | | Not rated | |
| 157: | | | | | | | |
| Nunn | 85 | Not limited | | Not limited | | Not limited | |
| 158: | | | | | | | |
| Nunn | 55 | Not limited | | Not limited | | Not limited | |
| Sampson, rarely flooded | 30 | Not limited | | Not limited | | Not limited | |
| 159: | | | | | | | |
| Nunn, dry | 50 | Not limited | | Not limited | | Not limited | |
| Sampson, dry, rarely flooded | 35 | Not limited | | Not limited | | Not limited | |
| 160: | | | | | | | |
| Olnest | 85 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| 161: | | | | | | | |
| Olnest | 85 | Not limited | | Not limited | | Not limited | |
| 162: | | | | | | | |
| Olnest | 85 | Not limited | | Not limited | | Not limited | |
| 163: | | | | | | | |
| Olnest | 90 | Not limited | | Not limited | | Somewhat limited: Slope | 0.04 |
| 164: | | | | | | | |
| Olney | 85 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| 165: | | | | | | | |
| Olney | 85 | Not limited | | Not limited | | Not limited | |
| 166: | | | | | | | |
| Olney | 85 | Not limited | | Not limited | | Not limited | |
| 167: | | | | | | | |
| Olney | 90 | Not limited | | Not limited | | Somewhat limited: Slope | 0.04 |
| 168: | | | | | | | |
| Olney | 55 | Not limited | | Not limited | | Not limited | |
| Midway | 30 | Not limited | | Not limited | | Very limited: Depth to bedrock<br>Droughty | 1.00<br>0.92 |
| 169: | | | | | | | |
| Otero | 85 | Not limited | | Not limited | | Not limited | |
| 170: | | | | | | | |
| Oterodry | 85 | Not limited | | Not limited | | Not limited | |
| 171: | | | | | | | |
| Oterodry | 85 | Not limited | | Not limited | | Not limited | |

Table 10b.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Paths and trails | | Off-road motorcycle trails | | Golf fairways | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 172: | | | | | | | |
| Platner | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 173: | | | | | | | |
| Platner | 50 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| Ascalon | 35 | Not limited | | Not limited | | Not limited | |
| 174: | | | | | | | |
| Pleasant, rarely ponded | 90 | Very limited: Depth to saturated zone; Dusty | 1.00; 0.50 | Very limited: Depth to saturated zone; Dusty | 1.00; 0.50 | Very limited: Depth to saturated zone | 1.00 |
| 175: | | | | | | | |
| Rago, rarely flooded | 90 | Not limited | | Not limited | | Not limited | |
| 176: | | | | | | | |
| Rago, dry, rarely flooded | 90 | Not limited | | Not limited | | Not limited | |
| 177: | | | | | | | |
| Razor | 85 | Not limited | | Not limited | | Very limited: Sodium content; Depth to bedrock | 1.00; 0.42 |
| 178: | | | | | | | |
| Razor, moist | 85 | Not limited | | Not limited | | Very limited: Sodium content; Depth to bedrock | 1.00; 0.42 |
| 179: | | | | | | | |
| Sampson, rarely flooded | 90 | Not limited | | Not limited | | Not limited | |
| 180: | | | | | | | |
| Sampson, dry, rarely flooded | 90 | Not limited | | Not limited | | Not limited | |
| 181: | | | | | | | |
| Satanta | 90 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 182: | | | | | | | |
| Satanta, dry | 90 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 183: | | | | | | | |
| Seldom, rarely flooded | 85 | Very limited: Depth to saturated zone | 1.00 | Very limited: Depth to saturated zone | 1.00 | Very limited: Depth to saturated zone | 1.00 |
| 184: | | | | | | | |
| Shingle | 55 | Not limited | | Not limited | | Very limited: Depth to bedrock; Droughty | 1.00; 0.71 |

Table 10b.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Paths and trails | | Off-road motorcycle trails | | Golf fairways | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 185: | | | | | | | |
| Midway | 30 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Depth to bedrock | 1.00 |
| | | | | | | Droughty | 0.92 |
| 185: | | | | | | | |
| Shingle, moist | 55 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Depth to bedrock | 1.00 |
| | | | | | | Droughty | 0.71 |
| Midway, moist | 30 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Depth to bedrock | 1.00 |
| | | | | | | Droughty | 0.92 |
| 186: | | | | | | | |
| Sundance | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Too sandy | 0.12 | Too sandy | 0.12 | | |
| 187: | | | | | | | |
| Table Mountain, rarely flooded | 85 | Not limited | | Not limited | | Not limited | |
| 188: | | | | | | | |
| Travessilla | 60 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 1.00 | Slope | 0.56 | Droughty | 1.00 |
| | | | | | | Depth to bedrock | 1.00 |
| | | | | | | Slope | 1.00 |
| | | | | | | Content of large stones | 0.08 |
| Rock outcrop | 25 | Not rated | | Not rated | | Not rated | |
| 189: | | | | | | | |
| Truckton | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Droughty | 0.21 |
| 190: | | | | | | | |
| Truckton | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Droughty | 0.21 |
| 191: | | | | | | | |
| Truckton, dry | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Droughty | 0.21 |
| 192: | | | | | | | |
| Truckton, dry | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Droughty | 0.21 |
| 193: | | | | | | | |
| Valent | 85 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Too sandy | 1.00 | Too sandy | 1.00 | Droughty | 0.69 |
| | | | | | | Slope | 0.63 |
| | | | | | | Too sandy | 0.50 |
| 194: | | | | | | | |
| Valent | 55 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Too sandy | 1.00 | Too sandy | 1.00 | Droughty | 0.69 |
| | | | | | | Too sandy | 0.50 |
| Bijou | 30 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Too sandy | 0.28 | Too sandy | 0.28 | | |

Table 10b.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Paths and trails | | Off-road motorcycle trails | | Golf fairways | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 195: | | | | | | | |
| Valent | 60 | Very limited: Too sandy | 1.00 | Very limited: Too sandy | 1.00 | Somewhat limited: Slope | 0.96 |
| | | | | | | Droughty | 0.69 |
| | | | | | | Too sandy | 0.50 |
| Vona | 30 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Slope | 0.04 |
| 196: | | | | | | | |
| Valent | 55 | Very limited: Too sandy | 1.00 | Very limited: Too sandy | 1.00 | Somewhat limited: Slope | 0.96 |
| | | | | | | Droughty | 0.69 |
| | | | | | | Too sandy | 0.50 |
| Vonid | 35 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Slope | 0.04 |
| 197: | | | | | | | |
| Vona | 85 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |
| 198: | | | | | | | |
| Vona | 85 | Not limited | | Not limited | | Not limited | |
| 199: | | | | | | | |
| Vona | 85 | Not limited | | Not limited | | Somewhat limited: Slope | 0.04 |
| 200: | | | | | | | |
| Vona | 35 | Not limited | | Not limited | | Not limited | |
| Karval | 30 | Somewhat limited: Slope | 0.18 | Not limited | | Very limited: Droughty | 1.00 |
| | | | | | | Slope | 1.00 |
| | | | | | | Gravel content | 0.32 |
| Midway, moist | 20 | Somewhat limited: Slope | 0.18 | Not limited | | Very limited: Depth to bedrock | 1.00 |
| | | | | | | Slope | 1.00 |
| | | | | | | Droughty | 0.92 |
| 201: | | | | | | | |
| Vona | 55 | Not limited | | Not limited | | Not limited | |
| Midway, moist | 30 | Not limited | | Not limited | | Very limited: Depth to bedrock | 1.00 |
| | | | | | | Droughty | 0.92 |
| 202: | | | | | | | |
| Vona | 60 | Not limited | | Not limited | | Somewhat limited: Slope | 0.96 |
| Seldom | 20 | Very limited: Depth to saturated zone | 1.00 | Very limited: Depth to saturated zone | 1.00 | Very limited: Depth to saturated zone | 1.00 |
| | | | | | | Slope | 0.96 |
| 203: | | | | | | | |
| Vonid | 85 | Somewhat limited: Too sandy | 0.28 | Somewhat limited: Too sandy | 0.28 | Not limited | |

Table 10b.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Paths and trails | | Off-road motorcycle trails | | Golf fairways | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 204: | | | | | | | |
| Vonid | 85 | Not limited | | Not limited | | Not limited | |
| 205: | | | | | | | |
| Vonid | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.04 |
| 206: | | | | | | | |
| Vonid | 35 | Not limited | | Not limited | | Not limited | |
| Karval | 30 | Somewhat limited: | | Not limited | | Very limited: | |
| | | Slope | 0.18 | | | Droughty | 1.00 |
| | | | | | | Slope | 1.00 |
| | | | | | | Gravel content | 0.32 |
| Midway | 20 | Somewhat limited: | | Not limited | | Very limited: | |
| | | Slope | 0.18 | | | Depth to bedrock | 1.00 |
| | | | | | | Slope | 1.00 |
| | | | | | | Droughty | 0.92 |
| 207: | | | | | | | |
| Vonid | 55 | Not limited | | Not limited | | Not limited | |
| Midway | 30 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Depth to bedrock | 1.00 |
| | | | | | | Droughty | 0.92 |
| 208: | | | | | | | |
| Vonid | 65 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.96 |
| Seldom | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | | | | | Slope | 0.96 |
| 209: | | | | | | | |
| Wages | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Dusty | 0.50 | Dusty | 0.50 | | |
| 210: | | | | | | | |
| Wages | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Slope | 0.04 |
| 211: | | | | | | | |
| Wages, dry | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Dusty | 0.50 | Dusty | 0.50 | | |
| 212: | | | | | | | |
| Wages | 60 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Dusty | 0.50 | Dusty | 0.50 | Slope | 0.37 |
| Karval | 25 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Droughty | 1.00 |
| | | | | | | Slope | 0.37 |
| | | | | | | Gravel content | 0.32 |
| 213: | | | | | | | |
| Weld | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Dusty | 0.50 | Dusty | 0.50 | | |

Table 10b.--Recreation--Continued

| Map symbol and soil name | Pct. of map unit | Paths and trails | | Off-road motorcycle trails | | Golf fairways | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 214: | | | | | | | |
| Weld, dry | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 215: | | | | | | | |
| Wiley | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 216: | | | | | | | |
| Wiley | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 217: | | | | | | | |
| Wilid | 85 | Somewhat limited: Dusty | 0.50 | Somewhat limited: Dusty | 0.50 | Not limited | |
| 218: | | | | | | | |
| Water | 90 | Not rated | | Not rated | | Not rated | |
| 219: | | | | | | | |
| Gravel pits | 100 | Not rated | | Not rated | | Not rated | |
| 220: | | | | | | | |
| Access denied | 100 | Not rated | | Not rated | | Not rated | |

Table 11.--Wildlife Habitat

(See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

| Map symbol and soil name | Potential for habitat elements | | | | | | | | Potential as habitat for— | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Shrubs | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife | Rangeland wildlife |
| 101: | | | | | | | | | | | | |
| Apishapa | Poor | Poor | Poor | --- | --- | --- | Fair | Fair | Poor | --- | Fair | Fair |
| 102: | | | | | | | | | | | | |
| Arvada | Very poor | Very poor | Poor | --- | --- | --- | Poor | Very poor | Very poor | --- | Very poor | Fair |
| 103: | | | | | | | | | | | | |
| Ascalon | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 104: | | | | | | | | | | | | |
| Ascalon | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 105: | | | | | | | | | | | | |
| Ascalon | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 106: | | | | | | | | | | | | |
| Ascalon | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 107: | | | | | | | | | | | | |
| Ascalon | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 108: | | | | | | | | | | | | |
| Ascalon | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 109: | | | | | | | | | | | | |
| Ascalon | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Haxtun | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 110: | | | | | | | | | | | | |
| Ascalon | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Haxtun | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 111: | | | | | | | | | | | | |
| Bacid | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 112: | | | | | | | | | | | | |
| Bankard | Poor | Poor | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| Glenberg | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 113: | | | | | | | | | | | | |
| Bijou | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |

Table 11.--Wildlife Habitat--Continued

| Map symbol and soil name | Potential for habitat elements | | | | | | | | Potential as habitat for— | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hard-wood trees | Conif-erous plants | Shrubs | Wetland plants | Shallow water areas | Open-land wild-life | Wood-land wild-life | Wetland wild-life | Range-land wild-life |
| 114: | | | | | | | | | | | | |
| Bijou | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 115: | | | | | | | | | | | | |
| Bijou | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 116: | | | | | | | | | | | | |
| Blakeland | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 117: | | | | | | | | | | | | |
| Bresser | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 118: | | | | | | | | | | | | |
| Campo | Poor | Good | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 119: | | | | | | | | | | | | |
| Canyon | Poor | Poor | Fair | --- | --- | Fair | Very poor | Very poor | Poor | --- | Very poor | Fair |
| Rock outcrop | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor |
| 120: | | | | | | | | | | | | |
| Colby | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 121: | | | | | | | | | | | | |
| Colby | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 122: | | | | | | | | | | | | |
| Colby | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Weld | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 123: | | | | | | | | | | | | |
| Firstview | --- | --- | Poor | --- | --- | --- | Poor | --- | Poor | --- | --- | Fair |
| 124: | | | | | | | | | | | | |
| Fort Collins | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 125: | | | | | | | | | | | | |
| Fort Collins | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 126: | | | | | | | | | | | | |
| Fort Collins | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Karval | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 127: | | | | | | | | | | | | |
| Fort Collins | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |

Table 11.--Wildlife Habitat--Continued

| Map symbol and soil name | Potential for habitat elements | | | | | | | | Potential as habitat for— | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Shrubs | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife | Rangeland wildlife |
| 127: | | | | | | | | | | | | |
| Platner | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 128: | | | | | | | | | | | | |
| Fort Collins | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Razor | Poor | Poor | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 129: | | | | | | | | | | | | |
| Fort | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 130: | | | | | | | | | | | | |
| Fort | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 131: | | | | | | | | | | | | |
| Fort | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Karval | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 132: | | | | | | | | | | | | |
| Fort | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Razor | Poor | Poor | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 133: | | | | | | | | | | | | |
| Haversid | Fair | Poor | Fair | --- | --- | Fair | Poor | Very poor | Fair | --- | Very poor | Fair |
| 134: | | | | | | | | | | | | |
| Haverson | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 135: | | | | | | | | | | | | |
| Haxtun | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 136: | | | | | | | | | | | | |
| Haxtun | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 137: | | | | | | | | | | | | |
| Haxtun | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Olney | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 138: | | | | | | | | | | | | |
| Haxtun | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Olnest | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |

Table 11.--Wildlife Habitat--Continued

| Map symbol and soil name | Potential for habitat elements | | | | | | | | Potential as habitat for— | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Shrubs | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife | Rangeland wildlife |
| 139: | | | | | | | | | | | | |
| Keith | Fair | Good | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 140: | | | | | | | | | | | | |
| Keith | Fair | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 141: | | | | | | | | | | | | |
| Kim | Poor | Poor | Fair | --- | --- | Fair | Very poor | Very poor | Poor | --- | Very poor | Fair |
| 142: | | | | | | | | | | | | |
| Kim | Poor | Poor | Fair | --- | --- | Fair | Very poor | Very poor | Poor | --- | Very poor | Fair |
| 143: | | | | | | | | | | | | |
| Kimst | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 144: | | | | | | | | | | | | |
| Kimst | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 145: | | | | | | | | | | | | |
| Las Animas | Poor | Fair | Good | --- | --- | Fair | Good | Poor | Fair | --- | Fair | Fair |
| 146: | | | | | | | | | | | | |
| Limon | Poor | Poor | Poor | --- | --- | --- | Poor | Very poor | Poor | --- | Very poor | Fair |
| 147: | | | | | | | | | | | | |
| Limon | Poor | Poor | Poor | --- | --- | --- | Poor | Very poor | Poor | --- | Very poor | Fair |
| 148: | | | | | | | | | | | | |
| Manzanola | Poor | Poor | Fair | --- | --- | Fair | Poor | Very poor | Poor | --- | Very poor | Fair |
| 149: | | | | | | | | | | | | |
| Manzanst | Fair | Fair | Fair | --- | --- | Fair | Poor | Very poor | Fair | --- | Very poor | Fair |
| 150: | | | | | | | | | | | | |
| Manzanst | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 151: | | | | | | | | | | | | |
| Midway | Very poor | Very poor | Fair | --- | --- | --- | Very poor | Very poor | Poor | --- | Very poor | Fair |
| 152: | | | | | | | | | | | | |
| Midway | Very poor | Very poor | Fair | --- | --- | --- | Very poor | Very poor | Poor | --- | Very poor | Fair |
| 153: | | | | | | | | | | | | |
| Midway | Very poor | Very poor | Fair | --- | --- | --- | Very poor | Very poor | Poor | --- | Very poor | Fair |
| Razor | Poor | Poor | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |

Table 11.--Wildlife Habitat--Continued

| Map symbol and soil name | Potential for habitat elements | | | | | | | | Potential as habitat for— | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Shrubs | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife | Rangeland wildlife |
| 154: | | | | | | | | | | | | |
| Midway | Very poor | Very poor | Fair | --- | --- | --- | Very poor | Very poor | Poor | --- | Very poor | Fair |
| Razor | Poor | Poor | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 155: | | | | | | | | | | | | |
| Midway | Very poor | Very poor | Fair | --- | --- | --- | Very poor | Very poor | Poor | --- | Very poor | Fair |
| Rock outcrop | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor |
| 156: | | | | | | | | | | | | |
| Midway | Very poor | Very poor | Fair | --- | --- | --- | Very poor | Very poor | Poor | --- | Very poor | Fair |
| Rock outcrop | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor |
| 157: | | | | | | | | | | | | |
| Nunn | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 158: | | | | | | | | | | | | |
| Nunn | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Sampson | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 159: | | | | | | | | | | | | |
| Nunn | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Sampson | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 160: | | | | | | | | | | | | |
| Olnest | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 161: | | | | | | | | | | | | |
| Olnest | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 162: | | | | | | | | | | | | |
| Olnest | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 163: | | | | | | | | | | | | |
| Olnest | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 164: | | | | | | | | | | | | |
| Olney | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 165: | | | | | | | | | | | | |
| Olney | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |

Table 11.--Wildlife Habitat--Continued

| Map symbol and soil name | Potential for habitat elements | | | | | | | | Potential as habitat for— | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Shrubs | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife | Rangeland wildlife |
| 166: | | | | | | | | | | | | |
| Olney | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 167: | | | | | | | | | | | | |
| Olney | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 168: | | | | | | | | | | | | |
| Olney | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| Midway | Very poor | Very poor | Fair | --- | --- | --- | Very poor | Very poor | Poor | --- | Very poor | Fair |
| 169: | | | | | | | | | | | | |
| Otero | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 170: | | | | | | | | | | | | |
| Oterodry | Poor | Poor | Fair | --- | --- | Fair | Poor | Very poor | Fair | --- | Very poor | Fair |
| 171: | | | | | | | | | | | | |
| Oterodry | Poor | Poor | Fair | --- | --- | Fair | Poor | Very poor | Fair | --- | Very poor | Fair |
| 172: | | | | | | | | | | | | |
| Platner | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 173: | | | | | | | | | | | | |
| Platner | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Ascalon | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 174: | | | | | | | | | | | | |
| Pleasant | Poor | Fair | Fair | --- | --- | --- | Poor | Poor | Fair | --- | Poor | Good |
| 175: | | | | | | | | | | | | |
| Rago | Fair | Fair | Good | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 176: | | | | | | | | | | | | |
| Rago | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 177: | | | | | | | | | | | | |
| Razor | Poor | Poor | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 178: | | | | | | | | | | | | |
| Razor | Poor | Poor | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 179: | | | | | | | | | | | | |
| Sampson | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 180: | | | | | | | | | | | | |
| Sampson | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |

Table 11.--Wildlife Habitat--Continued

| Map symbol and soil name | Potential for habitat elements | | | | | | | | Potential as habitat for— | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Shrubs | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife | Rangeland wildlife |
| 181: | | | | | | | | | | | | |
| Satanta | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 182: | | | | | | | | | | | | |
| Satanta | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 183: | | | | | | | | | | | | |
| Seldom | Fair | Good | Good | --- | --- | --- | Fair | Fair | Good | --- | Fair | Good |
| 184: | | | | | | | | | | | | |
| Shingle | Poor | Poor | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Midway | Very poor | Very poor | Fair | --- | --- | --- | Very poor | Very poor | Poor | --- | Very poor | Fair |
| 185: | | | | | | | | | | | | |
| Shingle | Poor | Poor | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Midway | Very poor | Very poor | Fair | --- | --- | --- | Very poor | Very poor | Poor | --- | Very poor | Fair |
| 186: | | | | | | | | | | | | |
| Sundance | Poor | Fair | Fair | --- | --- | Fair | Very poor | Very poor | Fair | --- | Very poor | Fair |
| 187: | | | | | | | | | | | | |
| Table Mountain | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 188: | | | | | | | | | | | | |
| Travessilla | Very poor | Very poor | Poor | --- | --- | --- | Very poor | Very poor | Very poor | --- | Very poor | Fair |
| Rock outcrop | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor |
| 189: | | | | | | | | | | | | |
| Truckton | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 190: | | | | | | | | | | | | |
| Truckton | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 191: | | | | | | | | | | | | |
| Truckton | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 192: | | | | | | | | | | | | |
| Truckton | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 193: | | | | | | | | | | | | |
| Valent | Poor | Poor | Fair | --- | --- | Fair | Very poor | Very poor | Poor | --- | Very poor | Fair |
| 194: | | | | | | | | | | | | |
| Valent | Poor | Poor | Fair | --- | --- | Fair | Very poor | Very poor | Poor | --- | Very poor | Fair |

Table 11.--Wildlife Habitat--Continued

| Map symbol and soil name | Potential for habitat elements | | | | | | | | Potential as habitat for— | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Shrubs | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife | Rangeland wildlife |
| 194: | | | | | | | | | | | | |
| Bijou | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 195: | | | | | | | | | | | | |
| Valent | Poor | Poor | Fair | --- | --- | Fair | Very poor | Very poor | Poor | --- | Very poor | Fair |
| Vona | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 196: | | | | | | | | | | | | |
| Valent | Poor | Poor | Fair | --- | --- | Fair | Very poor | Very poor | Poor | --- | Very poor | Fair |
| Vonid | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 197: | | | | | | | | | | | | |
| Vona | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 198: | | | | | | | | | | | | |
| Vona | Fair | Good | Fair | --- | --- | --- | Poor | Poor | Fair | --- | Very poor | Good |
| 199: | | | | | | | | | | | | |
| Vona | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 200: | | | | | | | | | | | | |
| Vona | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Karval | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| Midway | Very poor | Very poor | Fair | --- | --- | --- | Very poor | Very poor | Poor | --- | Very poor | Fair |
| 201: | | | | | | | | | | | | |
| Vona | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Midway | Very poor | Very poor | Fair | --- | --- | --- | Very poor | Very poor | Poor | --- | Very poor | Fair |
| 202: | | | | | | | | | | | | |
| Vona | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Seldom | Poor | Fair | Good | --- | --- | --- | --- | --- | Fair | --- | --- | Good |
| 203: | | | | | | | | | | | | |
| Vonid | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 204: | | | | | | | | | | | | |
| Vonid | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |

Table 11.--Wildlife Habitat--Continued

| Map symbol and soil name | Potential for habitat elements | | | | | | | | Potential as habitat for— | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Shrubs | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife | Rangeland wildlife |
| 205: | | | | | | | | | | | | |
| Vonid | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 206: | | | | | | | | | | | | |
| Vonid | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Karval | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| Midway | Very poor | Very poor | Fair | --- | --- | --- | Very poor | Very poor | Poor | --- | Very poor | Fair |
| 207: | | | | | | | | | | | | |
| Vonid | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Midway | Very poor | Very poor | Fair | --- | --- | --- | Very poor | Very poor | Poor | --- | Very poor | Fair |
| 208: | | | | | | | | | | | | |
| Vonid | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Seldom | Poor | Fair | Good | --- | --- | --- | --- | --- | Fair | --- | --- | Good |
| 209: | | | | | | | | | | | | |
| Wages | Fair | Fair | Good | --- | --- | Fair | Poor | Very poor | Fair | --- | Very poor | Fair |
| 210: | | | | | | | | | | | | |
| Wages | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 211: | | | | | | | | | | | | |
| Wages | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 212: | | | | | | | | | | | | |
| Wages | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| Karval | Poor | Fair | Fair | --- | --- | --- | Very poor | Very poor | Fair | --- | Very poor | Good |
| 213: | | | | | | | | | | | | |
| Weld | Fair | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 214: | | | | | | | | | | | | |
| Weld | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 215: | | | | | | | | | | | | |
| Wiley | Poor | Fair | Fair | --- | --- | Fair | Very poor | Very poor | Poor | --- | Very poor | Fair |
| 216: | | | | | | | | | | | | |
| Wiley | Poor | Fair | Fair | --- | --- | Fair | Very poor | Very poor | Poor | --- | Very poor | Fair |

Table 11.--Wildlife Habitat--Continued

| Map symbol and soil name | Potential for habitat elements | | | | | | | | Potential as habitat for— | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Shrubs | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife | Rangeland wildlife |
| 217: Wilid | Poor | Fair | Fair | --- | --- | --- | Poor | Very poor | Fair | --- | Very poor | Good |
| 218: Water. | | | | | | | | | | | | |
| 219: Gravel pits | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor | Very poor |
| 220: Access denied. | | | | | | | | | | | | |

Table 12a.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

| Map symbol and soil name | Pct. of map unit | Dwellings without basements | | Dwellings with basements | | Small commercial buildings | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 101: | | | | | | | |
| Apishapa, rarely ponded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Shrink-swell | 1.00 | Shrink-swell | 1.00 | Shrink-swell | 1.00 |
| 102: | | | | | | | |
| Arvada | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Shrink-swell | 1.00 | Shrink-swell | 1.00 | Shrink-swell | 1.00 |
| 103: | | | | | | | |
| Ascalon | 85 | Not limited | | Not limited | | Not limited | |
| 104: | | | | | | | |
| Ascalon | 85 | Not limited | | Not limited | | Not limited | |
| 105: | | | | | | | |
| Ascalon | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.86 |
| 106: | | | | | | | |
| Ascalon, dry | 85 | Not limited | | Not limited | | Not limited | |
| 107: | | | | | | | |
| Ascalon, dry | 85 | Not limited | | Not limited | | Not limited | |
| 108: | | | | | | | |
| Ascalon, dry | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.86 |
| 109: | | | | | | | |
| Ascalon | 55 | Not limited | | Not limited | | Not limited | |
| Haxtun | 30 | Not limited | | Not limited | | Not limited | |
| 110: | | | | | | | |
| Ascalon, dry | 55 | Not limited | | Not limited | | Not limited | |
| Haxtun, dry | 30 | Not limited | | Not limited | | Not limited | |
| 111: | | | | | | | |
| Bacid | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| 112: | | | | | | | |
| Bankard, occasionally flooded | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Flooding | 1.00 |
| Glenberg, occasionally flooded | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Flooding | 1.00 |

Table 12a.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Dwellings without basements | | Dwellings with basements | | Small commercial buildings | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 113: | | | | | | | |
| Bijou | 90 | Not limited | | Not limited | | Not limited | |
| 114: | | | | | | | |
| Bijou, moist | 90 | Not limited | | Not limited | | Not limited | |
| 115: | | | | | | | |
| Bijou, moist | 90 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| 116: | | | | | | | |
| Blakeland | 85 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| 117: | | | | | | | |
| Bresser | 85 | Not limited | | Not limited | | Not limited | |
| 118: | | | | | | | |
| Campo | 85 | Not limited | | Not limited | | Not limited | |
| 119: | | | | | | | |
| Canyon | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Depth to soft bedrock | 1.00 | Slope | 1.00 |
| | | Depth to soft bedrock | 1.00 | Slope | 1.00 | Depth to soft bedrock | 1.00 |
| Rock outcrop | 35 | Not rated | | Not rated | | Not rated | |
| 120: | | | | | | | |
| Colby | 85 | Not limited | | Not limited | | Not limited | |
| 121: | | | | | | | |
| Colby | 85 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| 122: | | | | | | | |
| Colby | 50 | Not limited | | Not limited | | Not limited | |
| Weld | 40 | Not limited | | Not limited | | Not limited | |
| 123: | | | | | | | |
| Firstview | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| 124: | | | | | | | |
| Fort Collins | 90 | Not limited | | Not limited | | Not limited | |
| 125: | | | | | | | |
| Fort Collins | 85 | Not limited | | Not limited | | Not limited | |
| 126: | | | | | | | |
| Fort Collins | 55 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| Karval | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Slope | 1.00 | Slope | 1.00 |
| 127: | | | | | | | |
| Fort Collins | 50 | Not limited | | Not limited | | Not limited | |

Table 12a.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Dwellings without basements | | Dwellings with basements | | Small commercial buildings | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 127: | | | | | | | |
| Platner | 35 | Somewhat limited: Shrink-swell | 0.50 | Somewhat limited: Shrink-swell | 0.50 | Somewhat limited: Shrink-swell | 0.50 |
| 128: | | | | | | | |
| Fort Collins | 50 | Not limited | | Not limited | | Very limited: Slope | 1.00 |
| Razor, moist | 40 | Very limited: Shrink-swell<br>Slope | 1.00<br>0.16 | Very limited: Shrink-swell<br>Depth to soft bedrock<br>Slope | 1.00<br>0.42<br>0.16 | Very limited: Shrink-swell<br>Slope | 1.00<br>1.00 |
| 129: | | | | | | | |
| Fort | 85 | Somewhat limited: Shrink-swell | 0.50 | Somewhat limited: Shrink-swell | 0.50 | Somewhat limited: Shrink-swell | 0.50 |
| 130: | | | | | | | |
| Fort | 85 | Somewhat limited: Shrink-swell | 0.50 | Somewhat limited: Shrink-swell | 0.50 | Somewhat limited: Shrink-swell | 0.50 |
| 131: | | | | | | | |
| Fort | 55 | Somewhat limited: Shrink-swell | 0.50 | Somewhat limited: Shrink-swell | 0.50 | Very limited: Slope<br>Shrink-swell | 1.00<br>0.50 |
| Karval | 35 | Very limited: Slope | 1.00 | Very limited: Slope | 1.00 | Very limited: Slope | 1.00 |
| 132: | | | | | | | |
| Fort | 50 | Somewhat limited: Shrink-swell | 0.50 | Somewhat limited: Shrink-swell | 0.50 | Very limited: Slope<br>Shrink-swell | 1.00<br>0.50 |
| Razor | 40 | Very limited: Shrink-swell<br>Slope | 1.00<br>0.16 | Very limited: Shrink-swell<br>Depth to soft bedrock<br>Slope | 1.00<br>0.42<br>0.16 | Very limited: Shrink-swell<br>Slope | 1.00<br>1.00 |
| 133: | | | | | | | |
| Haversid, rarely flooded | 85 | Very limited: Flooding | 1.00 | Very limited: Flooding | 1.00 | Very limited: Flooding | 1.00 |
| 134: | | | | | | | |
| Haverson, rarely flooded | 85 | Very limited: Flooding | 1.00 | Very limited: Flooding | 1.00 | Very limited: Flooding | 1.00 |
| 135: | | | | | | | |
| Haxtun | 85 | Not limited | | Not limited | | Not limited | |
| 136: | | | | | | | |
| Haxtun, dry | 85 | Not limited | | Not limited | | Not limited | |
| 137: | | | | | | | |
| Haxtun, dry | 55 | Not limited | | Not limited | | Not limited | |
| Olney | 30 | Not limited | | Not limited | | Not limited | |

Table 12a.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Dwellings without basements | | Dwellings with basements | | Small commercial buildings | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 138: | | | | | | | |
| Haxtun | 55 | Not limited | | Not limited | | Not limited | |
| Olnest | 30 | Not limited | | Not limited | | Not limited | |
| 139: | | | | | | | |
| Keith | 85 | Not limited | | Not limited | | Not limited | |
| 140: | | | | | | | |
| Keith | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.86 |
| 141: | | | | | | | |
| Kim | 90 | Not limited | | Not limited | | Not limited | |
| 142: | | | | | | | |
| Kim | 90 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| 143: | | | | | | | |
| Kimst | 90 | Not limited | | Not limited | | Not limited | |
| 144: | | | | | | | |
| Kimst | 90 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| 145: | | | | | | | |
| Las Animas, occasionally flooded | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Flooding | 1.00 |
| | | Depth to saturated zone | 0.44 | Depth to saturated zone | 1.00 | Depth to saturated zone | 0.44 |
| 146: | | | | | | | |
| Limon, rarely flooded | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Flooding | 1.00 |
| | | Shrink-swell | 1.00 | Shrink-swell | 1.00 | Shrink-swell | 1.00 |
| 147: | | | | | | | |
| Limon, moist, rarely flooded | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Flooding | 1.00 |
| | | Shrink-swell | 1.00 | Shrink-swell | 1.00 | Shrink-swell | 1.00 |
| 148: | | | | | | | |
| Manzanola | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| 149: | | | | | | | |
| Manzanst, rarely flooded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Flooding | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| 150: | | | | | | | |
| Manzanst | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |

Table 12a.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Dwellings without basements | | Dwellings with basements | | Small commercial buildings | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 151: | | | | | | | |
| Midway | 85 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| 152: | | | | | | | |
| Midway, moist | 85 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| 153: | | | | | | | |
| Midway | 55 | Somewhat limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Slope | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Depth to stof bedrock | 1.00 |
| | | Slope | 0.16 | Slope | 0.16 | Shrink-swell | 0.50 |
| Razor | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Shrink-swell | 1.00 | Shrink-swell | 1.00 | Shrink-swell | 1.00 |
| | | Slope | 0.16 | Depth to soft bedrock | 0.42 | Slope | 1.00 |
| | | | | Slope | 0.16 | | |
| 154: | | | | | | | |
| Midway, moist | 55 | Somewhat limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Slope | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Depth to soft bedrock | 1.00 |
| | | Slope | 0.16 | Slope | 0.16 | Shrink-swell | 0.50 |
| Razor, moist | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Shrink-swell | 1.00 | Shrink-swell | 1.00 | Shrink-swell | 1.00 |
| | | Slope | 0.16 | Depth to soft bedrock | 0.42 | Slope | 1.00 |
| | | | | Slope | 0.16 | | |
| 155: | | | | | | | |
| Midway | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Depth to soft bedrock | 1.00 | Slope | 1.00 |
| | | Depth to soft bedrock | 1.00 | Slope | 1.00 | Depth to soft bedrock | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| Rock outcrop | 30 | Not rated | | Not rated | | Not rated | |
| 156: | | | | | | | |
| Midway, moist | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Depth to soft bedrock | 1.00 | Slope | 1.00 |
| | | Depth to soft bedrock | 1.00 | Slope | 1.00 | Depth to soft bedrock | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| Rock outcrop, moist | 30 | Not rated | | Not rated | | Not rated | |
| 157: | | | | | | | |
| Nunn | 85 | Not limited | | Not limited | | Not limited | |

Table 12a.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Dwellings without basements | | Dwellings with basements | | Small commercial buildings | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 158: | | | | | | | |
| Nunn | 55 | Not limited | | Not limited | | Not limited | |
| Sampson, rarely flooded | 30 | Very limited: Flooding | 1.00 | Very limited: Flooding | 1.00 | Very limited: Flooding | 1.00 |
| 159: | | | | | | | |
| Nunn, dry | 50 | Not limited | | Not limited | | Not limited | |
| Sampson, dry, rarely flooded | 35 | Very limited: Flooding | 1.00 | Very limited: Flooding | 1.00 | Very limited: Flooding | 1.00 |
| 160: | | | | | | | |
| Olnest | 85 | Not limited | | Not limited | | Not limited | |
| 161: | | | | | | | |
| Olnest | 85 | Not limited | | Not limited | | Not limited | |
| 162: | | | | | | | |
| Olnest | 85 | Not limited | | Not limited | | Not limited | |
| 163: | | | | | | | |
| Olnest | 90 | Somewhat limited: Slope | 0.04 | Somewhat limited: Slope | 0.04 | Very limited: Slope | 1.00 |
| 164: | | | | | | | |
| Olney | 85 | Not limited | | Not limited | | Not limited | |
| 165: | | | | | | | |
| Olney | 85 | Not limited | | Not limited | | Not limited | |
| 166: | | | | | | | |
| Olney | 85 | Not limited | | Not limited | | Not limited | |
| 167: | | | | | | | |
| Olney | 90 | Somewhat limited: Slope | 0.04 | Somewhat limited: Slope | 0.04 | Very limited: Slope | 1.00 |
| 168: | | | | | | | |
| Olney | 55 | Not limited | | Not limited | | Very limited: Slope | 1.00 |
| Midway | 30 | Somewhat limited: Depth to soft bedrock<br>Shrink-swell | 1.00<br>0.50 | Very limited: Depth to soft bedrock<br>Shrink-swell | 1.00<br>0.50 | Very limited: Depth to soft bedrock<br>Slope<br>Shrink-swell | 1.00<br>1.00<br>0.50 |
| 169: | | | | | | | |
| Otero | 85 | Not limited | | Not limited | | Not limited | |
| 170: | | | | | | | |
| Oterodry | 85 | Not limited | | Not limited | | Not limited | |
| 171: | | | | | | | |
| Oterodry | 85 | Not limited | | Not limited | | Somewhat limited: Slope | 0.86 |
| 172: | | | | | | | |
| Platner | 85 | Somewhat limited: Shrink-swell | 0.50 | Somewhat limited: Shrink-swell | 0.50 | Somewhat limited: Shrink-swell | 0.50 |

Table 12a.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Dwellings without basements | | Dwellings with basements | | Small commercial buildings | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 173: | | | | | | | |
| Platner | 50 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| Ascalon | 35 | Not limited | | Not limited | | Not limited | |
| 174: | | | | | | | |
| Pleasant, rarely ponded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Shrink-swell | 1.00 | Shrink-swell | 1.00 | Shrink-swell | 1.00 |
| 175: | | | | | | | |
| Rago, rarely flooded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Flooding | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| 176: | | | | | | | |
| Rago, dry, rarely flooded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Flooding | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| 177: | | | | | | | |
| Razor | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Shrink-swell | 1.00 | Shrink-swell | 1.00 | Shrink-swell | 1.00 |
| | | | | Depth to soft bedrock | 0.42 | | |
| 178: | | | | | | | |
| Razor, moist | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Shrink-swell | 1.00 | Shrink-swell | 1.00 | Shrink-swell | 1.00 |
| | | | | Depth to soft bedrock | 0.42 | | |
| 179: | | | | | | | |
| Sampson, rarely flooded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Flooding | 1.00 |
| 180: | | | | | | | |
| Sampson, dry, rarely flooded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Flooding | 1.00 |
| 181: | | | | | | | |
| Satanta | 90 | Not limited | | Not limited | | Not limited | |
| 182: | | | | | | | |
| Satanta, dry | 90 | Not limited | | Not limited | | Not limited | |
| 183: | | | | | | | |
| Seldom, rarely flooded | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Flooding | 1.00 |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |

Table 12a.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Dwellings without basements | | Dwellings with basements | | Small commercial buildings | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 184: | | | | | | | |
| Shingle | 55 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | | | | | Slope | 0.12 |
| Midway | 30 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| | | | | | | Slope | 0.12 |
| 185: | | | | | | | |
| Shingle, moist | 55 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | | | | | Slope | 0.12 |
| Midway, moist | 30 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| | | | | | | Slope | 0.12 |
| 186: | | | | | | | |
| Sundance | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| 187: | | | | | | | |
| Table Mountain, rarely flooded | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Flooding | 1.00 |
| 188: | | | | | | | |
| Travessilla | 60 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to hard bedrock | 1.00 | Depth to hard bedrock | 1.00 | Depth to hard bedrock | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 | Slope | 1.00 |
| Rock outcrop | 25 | Not rated | | Not rated | | Not rated | |
| 189: | | | | | | | |
| Truckton | 85 | Not limited | | Not limited | | Not limited | |
| 190: | | | | | | | |
| Truckton | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.86 |
| 191: | | | | | | | |
| Truckton, dry | 85 | Not limited | | Not limited | | Not limited | |
| 192: | | | | | | | |
| Truckton, dry | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.86 |
| 193: | | | | | | | |
| Valent | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 0.63 | Slope | 0.63 | Slope | 1.00 |

Table 12a.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Dwellings without basements | | Dwellings with basements | | Small commercial buildings | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 194: | | | | | | | |
| Valent | 55 | Not limited | | Not limited | | Somewhat limited: Slope | 0.86 |
| Bijou | 30 | Not limited | | Not limited | | Somewhat limited: Slope | 0.86 |
| 195: | | | | | | | |
| Valent | 60 | Somewhat limited: Slope | 0.96 | Somewhat limited: Slope | 0.96 | Very limited: Slope | 1.00 |
| Vona | 30 | Somewhat limited: Slope | 0.04 | Somewhat limited: Slope | 0.04 | Very limited: Slope | 1.00 |
| 196: | | | | | | | |
| Valent | 55 | Somewhat limited: Slope | 0.96 | Somewhat limited: Slope | 0.96 | Very limited: Slope | 1.00 |
| Vonid | 35 | Somewhat limited: Slope | 0.04 | Somewhat limited: Slope | 0.04 | Very limited: Slope | 1.00 |
| 197: | | | | | | | |
| Vona | 85 | Not limited | | Not limited | | Somewhat limited: Slope | 0.12 |
| 198: | | | | | | | |
| Vona | 85 | Not limited | | Not limited | | Not limited | |
| 199: | | | | | | | |
| Vona | 85 | Somewhat limited: Slope | 0.04 | Somewhat limited: Slope | 0.04 | Very limited: Slope | 1.00 |
| 200: | | | | | | | |
| Vona | 35 | Not limited | | Not limited | | Very limited: Slope | 1.00 |
| Karval | 30 | Very limited: Slope | 1.00 | Very limited: Slope | 1.00 | Very limited: Slope | 1.00 |
| Midway, moist | 20 | Very limited: Slope<br>Depth to soft bedrock<br>Shrink-swell | 1.00<br>1.00<br>0.50 | Very limited: Depth to soft bedrock<br>Slope<br>Shrink-swell | 1.00<br>1.00<br>0.50 | Very limited: Slope<br>Depth to soft bedrock<br>Shrink-swell | 1.00<br>1.00<br>0.50 |
| 201: | | | | | | | |
| Vona | 55 | Not limited | | Not limited | | Very limited: Slope | 1.00 |
| Midway, moist | 30 | Somewhat limited: Depth to soft bedrock<br>Shrink-swell | 1.00<br>0.50 | Very limited: Depth to soft bedrock<br>Shrink-swell | 1.00<br>0.50 | Very limited: Depth to soft bedrock<br>Slope<br>Shrink-swell | 1.00<br>1.00<br>0.50 |
| 202: | | | | | | | |
| Vona | 60 | Somewhat limited: Slope | 0.96 | Somewhat limited: Slope | 0.96 | Very limited: Slope | 1.00 |

Table 12a.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Dwellings without basements | | Dwellings with basements | | Small commercial buildings | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 202: | | | | | | | |
| Seldom | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Slope | 0.96 | Slope | 0.96 | Slope | 1.00 |
| 203: | | | | | | | |
| Vonid | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Slope | 0.12 |
| 204: | | | | | | | |
| Vonid | 85 | Not limited | | Not limited | | Not limited | |
| 205: | | | | | | | |
| Vonid | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 0.04 | Slope | 0.04 | Slope | 1.00 |
| 206: | | | | | | | |
| Vonid | 35 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| Karval | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Slope | 1.00 | Slope | 1.00 |
| Midway | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Depth to soft bedrock | 1.00 | Slope | 1.00 |
| | | Depth to soft bedrock | 1.00 | Slope | 1.00 | Depth to soft bedrock | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Shrink-swell | 0.50 |
| 207: | | | | | | | |
| Vonid | 55 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Slope | 1.00 |
| Midway | 30 | Somewhat limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Slope | 1.00 |
| | | | | | | Shrink-swell | 0.50 |
| 208: | | | | | | | |
| Vonid | 65 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 0.96 | Slope | 0.96 | Slope | 1.00 |
| Seldom | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Slope | 0.96 | Slope | 0.96 | Slope | 1.00 |
| 209: | | | | | | | |
| Wages | 85 | Not limited | | Not limited | | Not limited | |
| 210: | | | | | | | |
| Wages | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 0.04 | Slope | 0.04 | Slope | 1.00 |
| 211: | | | | | | | |
| Wages, dry | 85 | Not limited | | Not limited | | Not limited | |

Table 12a.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Dwellings without basements | | Dwellings with basements | | Small commercial buildings | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 212: | | | | | | | |
| Wages | 60 | Somewhat limited: Slope | 0.37 | Somewhat limited: Slope | 0.37 | Very limited: Slope | 1.00 |
| Karval | 25 | Somewhat limited: Slope | 0.37 | Somewhat limited: Slope | 0.37 | Very limited: Slope | 1.00 |
| 213: | | | | | | | |
| Weld | 85 | Not limited | | Not limited | | Not limited | |
| 214: | | | | | | | |
| Weld, dry | 85 | Not limited | | Not limited | | Not limited | |
| 215: | | | | | | | |
| Wiley | 85 | Not limited | | Not limited | | Not limited | |
| 216: | | | | | | | |
| Wiley | 85 | Not limited | | Not limited | | Very limited: Slope | 1.00 |
| 217: | | | | | | | |
| Wilid | 85 | Not limited | | Not limited | | Not limited | |
| 218: | | | | | | | |
| Water | 90 | Not rated | | Not rated | | Not rated | |
| 219: | | | | | | | |
| Gravel pits | 100 | Not rated | | Not rated | | Not rated | |
| 220: | | | | | | | |
| Access denied | 100 | Not rated | | Not rated | | Not rated | |

Table 12b.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

| Map symbol and soil name | Pct. of map unit | Local roads and streets | | Shallow excavations | | Lawns and landscaping | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 101: Apishapa, rarely ponded | 90 | Very limited: Depth to saturated zone; Frost action; Shrink-swell; Low strength | 1.00; 1.00; 1.00; 1.00 | Very limited: Depth to saturated zone; Too clayey; Cutbanks cave | 1.00; 0.12; 0.10 | Very limited: Depth to saturated zone | 1.00 |
| 102: Arvada | 85 | Very limited: Low strength; Shrink-swell | 1.00; 1.00 | Somewhat limited: Too clayey; Cutbanks cave | 0.50; 0.10 | Very limited: Sodium content | 1.00 |
| 103: Ascalon | 85 | Somewhat limited: Frost action | 0.50 | Somewhat limited: Cutbanks cave | 0.10 | Not limited | |
| 104: Ascalon | 85 | Somewhat limited: Frost action | 0.50 | Somewhat limited: Cutbanks cave | 0.10 | Not limited | |
| 105: Ascalon | 85 | Somewhat limited: Frost action | 0.50 | Somewhat limited: Cutbanks cave | 0.10 | Not limited | |
| 106: Ascalon, dry | 85 | Somewhat limited: Frost action | 0.50 | Somewhat limited: Cutbanks cave | 0.10 | Not limited | |
| 107: Ascalon, dry | 85 | Somewhat limited: Frost action | 0.50 | Somewhat limited: Cutbanks cave | 0.10 | Not limited | |
| 108: Ascalon, dry | 85 | Somewhat limited: Frost action | 0.50 | Somewhat limited: Cutbanks cave | 0.10 | Not limited | |
| 109: Ascalon | 55 | Somewhat limited: Frost action | 0.50 | Somewhat limited: Cutbanks cave | 0.10 | Not limited | |
| Haxtun | 30 | Somewhat limited: Frost action | 0.50 | Somewhat limited: Cutbanks cave | 0.10 | Not limited | |
| 110: Ascalon, dry | 55 | Somewhat limited: Frost action | 0.50 | Somewhat limited: Cutbanks cave | 0.10 | Not limited | |
| Haxtun, dry | 30 | Somewhat limited: Frost action | 0.50 | Somewhat limited: Cutbanks cave | 0.10 | Not limited | |
| 111: Bacid | 85 | Very limited: Low strength; Shrink-swell | 1.00; 0.50 | Somewhat limited: Cutbanks cave; Too clayey | 0.10; 0.03 | Not limited | |

Table 12b.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Local roads and streets | | Shallow excavations | | Lawns and landscaping | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 112: | | | | | | | |
| Bankard, occasionally flooded | 55 | Very limited: Flooding | 1.00 | Very limited: Cutbanks cave<br>Flooding | 1.00<br>0.60 | Somewhat limited: Droughty<br>Flooding | 0.90<br>0.60 |
| Glenberg, occasionally flooded | 30 | Very limited: Flooding | 1.00 | Very limited: Cutbanks cave<br>Flooding | 1.00<br>0.60 | Somewhat limited: Flooding | 0.60 |
| 113: | | | | | | | |
| Bijou | 90 | Not limited | | Very limited: Cutbanks cave | 1.00 | Not limited | |
| 114: | | | | | | | |
| Bijou, moist | 90 | Not limited | | Very limited: Cutbanks cave | 1.00 | Not limited | |
| 115: | | | | | | | |
| Bijou, moist | 90 | Not limited | | Very limited: Cutbanks cave | 1.00 | Not limited | |
| 116: | | | | | | | |
| Blakeland | 85 | Not limited | | Very limited: Cutbanks cave | 1.00 | Somewhat limited: Droughty | 0.69 |
| 117: | | | | | | | |
| Bresser | 85 | Somewhat limited: Frost action | 0.50 | Very limited: Cutbanks cave | 1.00 | Somewhat limited: Droughty | 0.10 |
| 118: | | | | | | | |
| Campo | 85 | Somewhat limited: Low strength | 0.78 | Somewhat limited: Too clayey<br>Cutbanks cave | 0.28<br>0.10 | Not limited | |
| 119: | | | | | | | |
| Canyon | 55 | Very limited: Slope<br>Depth to soft bedrock | 1.00<br>1.00 | Very limited: Depth to soft bedrock<br>Slope<br>Cutbanks cave | 1.00<br>1.00<br>0.10 | Very limited: Droughty<br>Depth to bedrock<br>Slope<br>Content of large stones<br>Gravel content | 1.00<br>1.00<br>1.00<br>0.20<br>0.09 |
| Rock outcrop | 35 | Not rated | | Not rated | | Not rated | |
| 120: | | | | | | | |
| Colby | 85 | Not limited | | Somewhat limited: Cutbanks cave | 0.10 | Not limited | |
| 121: | | | | | | | |
| Colby | 85 | Not limited | | Somewhat limited: Cutbanks cave | 0.10 | Not limited | |
| 122: | | | | | | | |
| Colby | 50 | Not limited | | Somewhat limited: Cutbanks cave | 0.10 | Not limited | |

Table 12b.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Local roads and streets | | Shallow excavations | | Lawns and landscaping | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 122: | | | | | | | |
| Weld | 40 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| 123: | | | | | | | |
| Firstview | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Low strength | 1.00 | Cutbanks cave | 1.00 | Sodium content | 1.00 |
| | | Shrink-swell | 0.50 | | | | |
| 124: | | | | | | | |
| Fort Collins | 90 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| 125: | | | | | | | |
| Fort Collins | 85 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| 126: | | | | | | | |
| Fort Collins | 55 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| Karval | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Cutbanks cave | 1.00 | Droughty | 1.00 |
| | | | | Slope | 1.00 | Slope | 1.00 |
| | | | | | | Gravel content | 0.32 |
| 127: | | | | | | | |
| Fort Collins | 50 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| Platner | 35 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Shrink-swell | 0.50 | Too clayey | 0.03 | | |
| 128: | | | | | | | |
| Fort Collins | 50 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| Razor, moist | 40 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Low strength | 1.00 | Depth to soft bedrock | 0.42 | Sodium content | 1.00 |
| | | Shrink-swell | 1.00 | | | Depth to bedrock | 0.42 |
| | | Slope | 0.16 | Too clayey | 0.28 | Slope | 0.16 |
| | | | | Slope | 0.16 | | |
| | | | | Cutbanks cave | 0.10 | | |
| 129: | | | | | | | |
| Fort | 85 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Shrink-swell | 0.50 | | | | |
| 130: | | | | | | | |
| Fort | 85 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Shrink-swell | 0.50 | | | | |
| 131: | | | | | | | |
| Fort | 55 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Shrink-swell | 0.50 | | | | |

Table 12b.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Local roads and streets | | Shallow excavations | | Lawns and landscaping | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 131: | | | | | | | |
| Karval | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Cutbanks cave | 1.00 | Droughty | 1.00 |
| | | | | Slope | 1.00 | Slope | 1.00 |
| | | | | | | Gravel content | 0.32 |
| 132: | | | | | | | |
| Fort | 50 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Shrink-swell | 0.50 | | | | |
| Razor | 40 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Low strength | 1.00 | Depth to soft bedrock | 0.42 | Sodium content | 1.00 |
| | | Shrink-swell | 1.00 | | | Depth to bedrock | 0.42 |
| | | Slope | 0.16 | Too clayey | 0.28 | Slope | 0.16 |
| | | | | Slope | 0.16 | | |
| | | | | Cutbanks cave | 0.10 | | |
| 133: | | | | | | | |
| Haversid, rarely flooded | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Flooding | 0.40 | Cutbanks cave | 0.10 | | |
| 134: | | | | | | | |
| Haverson, rarely flooded | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Flooding | 0.40 | Cutbanks cave | 0.10 | | |
| 135: | | | | | | | |
| Haxtun | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 136: | | | | | | | |
| Haxtun, dry | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 137: | | | | | | | |
| Haxtun, dry | 55 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| Olney | 30 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| 138: | | | | | | | |
| Haxtun | 55 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| Olnest | 30 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 139: | | | | | | | |
| Keith | 85 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Frost action | 0.50 | | | | |
| 140: | | | | | | | |
| Keith | 85 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Frost action | 0.50 | | | | |

Table 12b.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Local roads and streets | | Shallow excavations | | Lawns and landscaping | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 141: | | | | | | | |
| Kim | 90 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| 142: | | | | | | | |
| Kim | 90 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| 143: | | | | | | | |
| Kimst | 90 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| 144: | | | | | | | |
| Kimst | 90 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| 145: | | | | | | | |
| Las Animas, occasionally flooded | 85 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Frost action | 1.00 | Cutbanks cave | 1.00 | Flooding | 0.60 |
| | | Flooding | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 0.19 |
| | | Depth to saturated zone | 0.19 | Flooding | 0.60 | | |
| 146: | | | | | | | |
| Limon, rarely flooded | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Low strength | 1.00 | Too clayey | 0.28 | Too clayey | 1.00 |
| | | Shrink-swell | 1.00 | Cutbanks cave | 0.10 | Salinity | 0.13 |
| | | Flooding | 0.40 | | | | |
| 147: | | | | | | | |
| Limon, moist, rarely flooded | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Low strength | 1.00 | Too clayey | 0.28 | Too clayey | 1.00 |
| | | Shrink-swell | 1.00 | Cutbanks cave | 0.10 | Salinity | 0.13 |
| | | Flooding | 0.40 | | | | |
| 148: | | | | | | | |
| Manzanola | 85 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Shrink-swell | 0.50 | | | | |
| 149: | | | | | | | |
| Manzanst, rarely flooded | 90 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Shrink-swell | 0.50 | Too clayey | 0.03 | | |
| | | Flooding | 0.40 | | | | |
| 150: | | | | | | | |
| Manzanst | 85 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Shrink-swell | 0.50 | Too clayey | 0.03 | | |

Table 12b.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Local roads and streets | | Shallow excavations | | Lawns and landscaping | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 151: | | | | | | | |
| Midway | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | Droughty | 0.92 |
| | | Shrink-swell | 0.50 | | | | |
| 152: | | | | | | | |
| Midway, moist | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | Droughty | 0.92 |
| | | Shrink-swell | 0.50 | | | | |
| 153: | | | | | | | |
| Midway | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Low strength | 1.00 | Slope | 0.16 | Droughty | 0.92 |
| | | Shrink-swell | 0.50 | Cutbanks cave | 0.10 | Slope | 0.16 |
| | | Slope | 0.16 | | | | |
| Razor | 30 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Low strength | 1.00 | Depth to soft bedrock | 0.42 | Sodium content | 1.00 |
| | | Shrink-swell | 1.00 | Too clayey | 0.28 | Depth to bedrock | 0.42 |
| | | Slope | 0.16 | Slope | 0.16 | Slope | 0.16 |
| | | | | Cutbanks cave | 0.10 | | |
| 154: | | | | | | | |
| Midway, moist | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Low strength | 1.00 | Slope | 0.16 | Droughty | 0.92 |
| | | Shrink-swell | 0.50 | Cutbanks cave | 0.10 | Slope | 0.16 |
| | | Slope | 0.16 | | | | |
| Razor, moist | 30 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Low strength | 1.00 | Depth to soft bedrock | 0.42 | Sodium content | 1.00 |
| | | Shrink-swell | 1.00 | Too clayey | 0.28 | Depth to bedrock | 0.42 |
| | | Slope | 0.16 | Slope | 0.16 | Slope | 0.16 |
| | | | | Cutbanks cave | 0.10 | | |
| 155: | | | | | | | |
| Midway | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Depth to soft bedrock | 1.00 | Slope | 1.00 | Slope | 1.00 |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | Droughty | 0.92 |
| | | Shrink-swell | 0.50 | | | | |
| Rock outcrop | 30 | Not rated | | Not rated | | Not rated | |
| 156: | | | | | | | |
| Midway, moist | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Depth to soft bedrock | 1.00 | Slope | 1.00 | Slope | 1.00 |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | Droughty | 0.92 |
| | | Shrink-swell | 0.50 | | | | |

Table 12b.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Local roads and streets | | Shallow excavations | | Lawns and landscaping | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 156: | | | | | | | |
| Rock outcrop, moist- | 30 | Not rated | | Not rated | | Not rated | |
| 157: | | | | | | | |
| Nunn | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| | | | | Too clayey | 0.03 | | |
| 158: | | | | | | | |
| Nunn | 55 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| | | | | Too clayey | 0.03 | | |
| Sampson, rarely flooded | 30 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| | | Flooding | 0.40 | | | | |
| 159: | | | | | | | |
| Nunn, dry | 50 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| | | | | Too clayey | 0.03 | | |
| Sampson, dry, rarely flooded | 35 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| | | Flooding | 0.40 | | | | |
| 160: | | | | | | | |
| Olnest | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 161: | | | | | | | |
| Olnest | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 162: | | | | | | | |
| Olnest | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 163: | | | | | | | |
| Olnest | 90 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | Slope | 0.04 |
| | | Slope | 0.04 | Slope | 0.04 | | |
| 164: | | | | | | | |
| Olney | 85 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| 165: | | | | | | | |
| Olney | 85 | Not limited | | Very limited: | | Not limited | |
| | | | | Cutbanks cave | 1.00 | | |
| 166: | | | | | | | |
| Olney | 85 | Not limited | | Very limited: | | Not limited | |
| | | | | Cutbanks cave | 1.00 | | |
| 167: | | | | | | | |
| Olney | 90 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Slope | 0.04 | Cutbanks cave | 1.00 | Slope | 0.04 |
| | | | | Slope | 0.04 | | |

Table 12b.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Local roads and streets | | Shallow excavations | | Lawns and landscaping | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 168: | | | | | | | |
| Olney | 55 | Not limited | | Very limited: | | Not limited | |
| | | | | Cutbanks cave | 1.00 | | |
| Midway | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | Droughty | 0.92 |
| | | Shrink-swell | 0.50 | | | | |
| 169: | | | | | | | |
| Otero | 85 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| 170: | | | | | | | |
| Oterodry | 85 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| 171: | | | | | | | |
| Oterodry | 85 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| 172: | | | | | | | |
| Platner | 85 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Shrink-swell | 0.50 | Too clayey | 0.03 | | |
| 173: | | | | | | | |
| Platner | 50 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Shrink-swell | 0.50 | Too clayey | 0.03 | | |
| Ascalon | 35 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 174: | | | | | | | |
| Pleasant, rarely ponded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Low strength | 1.00 | Too clayey | 0.18 | | |
| | | Shrink-swell | 1.00 | Cutbanks cave | 0.10 | | |
| 175: | | | | | | | |
| Rago, rarely flooded | 90 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Shrink-swell | 0.50 | | | | |
| | | Flooding | 0.40 | | | | |
| 176: | | | | | | | |
| Rago, dry, rarely flooded | 90 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Shrink-swell | 0.50 | | | | |
| | | Flooding | 0.40 | | | | |

Table 12b.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Local roads and streets | | Shallow excavations | | Lawns and landscaping | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 177: | | | | | | | |
| Razor | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Low strength | 1.00 | Depth to soft bedrock | 0.42 | Sodium content | 1.00 |
| | | Shrink-swell | 1.00 | Too clayey | 0.28 | Depth to bedrock | 0.42 |
| | | | | Cutbanks cave | 0.10 | | |
| 178: | | | | | | | |
| Razor, moist | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Low strength | 1.00 | Depth to soft bedrock | 0.42 | Sodium content | 1.00 |
| | | Shrink-swell | 1.00 | Too clayey | 0.28 | Depth to bedrock | 0.42 |
| | | | | Cutbanks cave | 0.10 | | |
| 179: | | | | | | | |
| Sampson, rarely flooded | 90 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| | | Flooding | 0.40 | | | | |
| 180: | | | | | | | |
| Sampson, dry, rarely flooded | 90 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| | | Flooding | 0.40 | | | | |
| 181: | | | | | | | |
| Satanta | 90 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 182: | | | | | | | |
| Satanta, dry | 90 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 183: | | | | | | | |
| Seldom, rarely flooded | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Flooding | 0.40 | Cutbanks cave | 0.10 | | |
| 184: | | | | | | | |
| Shingle | 55 | Somewhat limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Low strength | 0.78 | Cutbanks cave | 0.10 | Droughty | 0.71 |
| Midway | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | Droughty | 0.92 |
| | | Shrink-swell | 0.50 | | | | |
| 185: | | | | | | | |
| Shingle, moist | 55 | Somewhat limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Low strength | 0.78 | Cutbanks cave | 0.10 | Droughty | 0.71 |

Table 12b.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Local roads and streets | | Shallow excavations | | Lawns and landscaping | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 185: | | | | | | | |
| Midway, moist | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | Droughty | 0.92 |
| | | Shrink-swell | 0.50 | | | | |
| 186: | | | | | | | |
| Sundance | 85 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| | | Shrink-swell | 0.50 | | | | |
| 187: | | | | | | | |
| Table Mountain, rarely flooded | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| | | Flooding | 0.40 | | | | |
| 188: | | | | | | | |
| Travessilla | 60 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to hard bedrock | 1.00 | Depth to hard bedrock | 1.00 | Droughty | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 | Depth to bedrock | 1.00 |
| | | | | Cutbanks cave | 0.10 | Slope | 1.00 |
| | | | | | | Content of large stones | 0.08 |
| Rock outcrop | 25 | Not rated | | Not rated | | Not rated | |
| 189: | | | | | | | |
| Truckton | 85 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Frost action | 0.50 | Cutbanks cave | 1.00 | Droughty | 0.21 |
| 190: | | | | | | | |
| Truckton | 85 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Frost action | 0.50 | Cutbanks cave | 1.00 | Droughty | 0.21 |
| 191: | | | | | | | |
| Truckton, dry | 85 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Frost action | 0.50 | Cutbanks cave | 1.00 | Droughty | 0.21 |
| 192: | | | | | | | |
| Truckton, dry | 85 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Frost action | 0.50 | Cutbanks cave | 1.00 | Droughty | 0.21 |
| 193: | | | | | | | |
| Valent | 85 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Slope | 0.63 | Cutbanks cave | 1.00 | Droughty | 0.69 |
| | | | | Slope | 0.63 | Slope | 0.63 |
| | | | | | | Too sandy | 0.50 |
| 194: | | | | | | | |
| Valent | 55 | Not limited | | Very limited: | | Somewhat limited: | |
| | | | | Cutbanks cave | 1.00 | Droughty | 0.69 |
| | | | | | | Too sandy | 0.50 |
| Bijou | 30 | Not limited | | Very limited: | | Not limited | |
| | | | | Cutbanks cave | 1.00 | | |

Table 12b.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Local roads and streets | | Shallow excavations | | Lawns and landscaping | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 195: | | | | | | | |
| Valent | 60 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Slope | 0.96 | Cutbanks cave | 1.00 | Slope | 0.96 |
| | | | | Slope | 0.96 | Droughty | 0.69 |
| | | | | | | Too sandy | 0.50 |
| Vona | 30 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Slope | 0.04 | Cutbanks cave | 1.00 | Slope | 0.04 |
| | | | | Slope | 0.04 | | |
| 196: | | | | | | | |
| Valent | 55 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Slope | 0.96 | Cutbanks cave | 1.00 | Slope | 0.96 |
| | | | | Slope | 0.96 | Droughty | 0.69 |
| | | | | | | Too sandy | 0.50 |
| Vonid | 35 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Slope | 0.04 | Cutbanks cave | 0.10 | Slope | 0.04 |
| | | | | Slope | 0.04 | | |
| 197: | | | | | | | |
| Vona | 85 | Not limited | | Very limited: | | Not limited | |
| | | | | Cutbanks cave | 1.00 | | |
| 198: | | | | | | | |
| Vona | 85 | Not limited | | Very limited: | | Not limited | |
| | | | | Cutbanks cave | 1.00 | | |
| 199: | | | | | | | |
| Vona | 85 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Slope | 0.04 | Cutbanks cave | 1.00 | Slope | 0.04 |
| | | | | Slope | 0.04 | | |
| 200: | | | | | | | |
| Vona | 35 | Not limited | | Very limited: | | Not limited | |
| | | | | Cutbanks cave | 1.00 | | |
| Karval | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Cutbanks cave | 1.00 | Droughty | 1.00 |
| | | | | Slope | 1.00 | Slope | 1.00 |
| | | | | | | Gravel content | 0.32 |
| Midway, moist | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Depth to soft bedrock | 1.00 | Slope | 1.00 | Slope | 1.00 |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | Droughty | 0.92 |
| | | Shrink-swell | 0.50 | | | | |
| 201: | | | | | | | |
| Vona | 55 | Not limited | | Very limited: | | Not limited | |
| | | | | Cutbanks cave | 1.00 | | |
| Midway, moist | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | Droughty | 0.92 |
| | | Shrink-swell | 0.50 | | | | |

Table 12b.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Local roads and streets | | Shallow excavations | | Lawns and landscaping | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 202: | | | | | | | |
| Vona | 60 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Slope | 0.96 | Cutbanks cave | 1.00 | Slope | 0.96 |
| | | | | Slope | 0.96 | | |
| Seldom | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Slope | 0.96 | Slope | 0.96 | Slope | 0.96 |
| | | | | Cutbanks cave | 0.10 | | |
| 203: | | | | | | | |
| Vonid | 85 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| 204: | | | | | | | |
| Vonid | 85 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| 205: | | | | | | | |
| Vonid | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Slope | 0.04 | Cutbanks cave | 0.10 | Slope | 0.04 |
| | | | | Slope | 0.04 | | |
| 206: | | | | | | | |
| Vonid | 35 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| Karval | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Cutbanks cave | 1.00 | Droughty | 1.00 |
| | | | | Slope | 1.00 | Slope | 1.00 |
| | | | | | | Gravel content | 0.32 |
| Midway | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Slope | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Depth to soft bedrock | 1.00 | Slope | 1.00 | Slope | 1.00 |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | Droughty | 0.92 |
| | | Shrink-swell | 0.50 | | | | |
| 207: | | | | | | | |
| Vonid | 55 | Not limited | | Somewhat limited: | | Not limited | |
| | | | | Cutbanks cave | 0.10 | | |
| Midway | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | Droughty | 0.92 |
| | | Shrink-swell | 0.50 | | | | |
| 208: | | | | | | | |
| Vonid | 65 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Slope | 0.96 | Slope | 0.96 | Slope | 0.96 |
| | | | | Cutbanks cave | 0.10 | | |
| Seldom | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Slope | 0.96 | Slope | 0.96 | Slope | 0.96 |
| | | | | Cutbanks cave | 0.10 | | |

Table 12b.--Building Site Development--Continued

| Map symbol and soil name | Pct. of map unit | Local roads and streets | | Shallow excavations | | Lawns and landscaping | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 209: | | | | | | | |
| Wages | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 210: | | | | | | | |
| Wages | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | Slope | 0.04 |
| | | Slope | 0.04 | Slope | 0.04 | | |
| 211: | | | | | | | |
| Wages, dry | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 212: | | | | | | | |
| Wages | 60 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Frost action | 0.50 | Slope | 0.37 | Slope | 0.37 |
| | | Slope | 0.37 | Cutbanks cave | 0.10 | | |
| Karval | 25 | Somewhat limited: | | Very limited: | | Very limited: | |
| | | Slope | 0.37 | Cutbanks cave | 1.00 | Droughty | 1.00 |
| | | | | Slope | 0.37 | Slope | 0.37 |
| | | | | | | Gravel content | 0.32 |
| 213: | | | | | | | |
| Weld | 85 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| 214: | | | | | | | |
| Weld, dry | 85 | Very limited: | | Somewhat limited: | | Not limited | |
| | | Low strength | 1.00 | Cutbanks cave | 0.10 | | |
| 215: | | | | | | | |
| Wiley | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 216: | | | | | | | |
| Wiley | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 217: | | | | | | | |
| Wilid | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Frost action | 0.50 | Cutbanks cave | 0.10 | | |
| 218: | | | | | | | |
| Water | 90 | Not rated | | Not rated | | Not rated | |
| 219: | | | | | | | |
| Gravel pits | 100 | Not rated | | Not rated | | Not rated | |
| 220: | | | | | | | |
| Access denied | 100 | Not rated | | Not rated | | Not rated | |

Table 13a.--Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 101: Apishapa, rarely ponded | 90 | Very limited: Restricted permeability | 1.00 | Very limited: Depth to saturated zone | 1.00 |
| | | Depth to saturated zone | 1.00 | Slope | 0.01 |
| 102: Arvada | 85 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Slope | 0.09 |
| 103: Ascalon | 85 | Not limited | | Very limited: Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 104: Ascalon | 85 | Not limited | | Very limited: Seepage | 1.00 |
| | | | | Slope | 0.33 |
| 105: Ascalon | 85 | Not limited | | Very limited: Seepage | 1.00 |
| | | | | Slope | 1.00 |
| 106: Ascalon, dry | 85 | Not limited | | Very limited: Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 107: Ascalon, dry | 85 | Not limited | | Very limited: Seepage | 1.00 |
| | | | | Slope | 0.33 |
| 108: Ascalon, dry | 85 | Not limited | | Very limited: Seepage | 1.00 |
| | | | | Slope | 1.00 |
| 109: Ascalon | 55 | Not limited | | Very limited: Seepage | 1.00 |
| | | | | Slope | 0.01 |
| Haxtun | 30 | Very limited: Restricted permeability | 1.00 | Very limited: Seepage | 1.00 |
| | | | | Slope | 0.01 |

Table 13a.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 110: | | | | | |
| Ascalon, dry | 55 | Not limited | | Very limited: | |
| | | | | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| Haxtun, dry | 30 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 111: | | | | | |
| Bacid | 85 | Very limited: | | Not limited | |
| | | Restricted permeability | 1.00 | | |
| 112: | | | | | |
| Bankard, occasionally flooded | 55 | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| Glenberg, occasionally flooded | 30 | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 113: | | | | | |
| Bijou | 90 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 114: | | | | | |
| Bijou, moist | 90 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 115: | | | | | |
| Bijou, moist | 90 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| 116: | | | | | |
| Blakeland | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| 117: | | | | | |
| Bresser | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.09 |
| 118: | | | | | |
| Campo | 85 | Very limited: | | Not limited | |
| | | Restricted permeability | 1.00 | | |

Table 13a.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 119: | | | | | |
| Canyon | 55 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 |
| Rock outcrop | 35 | Not rated | | Not rated | |
| 120: | | | | | |
| Colby | 85 | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 0.50 | Seepage | 0.50 |
| | | | | Slope | 0.01 |
| 121: | | | | | |
| Colby | 85 | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 0.50 | Slope | 1.00 |
| | | | | Seepage | 0.50 |
| 122: | | | | | |
| Colby | 50 | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 0.50 | Seepage | 0.50 |
| | | | | Slope | 0.09 |
| Weld | 40 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Slope | 0.09 |
| 123: | | | | | |
| Firstview | 85 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Seepage | 0.18 |
| 124: | | | | | |
| Fort Collins | 90 | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 0.68 | Seepage | 1.00 |
| 125: | | | | | |
| Fort Collins | 85 | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 0.68 | Seepage | 1.00 |
| | | | | Slope | 0.33 |
| 126: | | | | | |
| Fort Collins | 55 | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 0.68 | Slope | 1.00 |
| | | | | Seepage | 1.00 |
| Karval | 35 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Slope | 1.00 |
| | | Slope | 1.00 | Seepage | 1.00 |
| 127: | | | | | |
| Fort Collins | 50 | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 0.68 | Seepage | 1.00 |
| | | | | Slope | 0.09 |
| Platner | 35 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Slope | 0.09 |

Table 13a.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 128: | | | | | |
| Fort Collins | 50 | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 0.68 | Slope | 1.00 |
| | | | | Seepage | 1.00 |
| Razor, moist | 40 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Depth to soft bedrock | 1.00 |
| | | Depth to bedrock | 1.00 | Slope | 1.00 |
| | | Slope | 0.16 | | |
| 129: | | | | | |
| Fort | 85 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Seepage | 0.50 |
| | | | | Slope | 0.01 |
| 130: | | | | | |
| Fort | 85 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Seepage | 0.50 |
| | | | | Slope | 0.33 |
| 131: | | | | | |
| Fort | 55 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Slope | 1.00 |
| | | | | Seepage | 0.50 |
| Karval | 35 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Slope | 1.00 |
| | | Slope | 1.00 | Seepage | 1.00 |
| 132: | | | | | |
| Fort | 50 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Slope | 1.00 |
| | | | | Seepage | 0.50 |
| Razor | 40 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Depth to soft bedrock | 1.00 |
| | | Depth to bedrock | 1.00 | Slope | 1.00 |
| | | Slope | 0.16 | | |
| 133: | | | | | |
| Haversid, rarely flooded | 85 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Flooding | 0.40 |
| | | | | Slope | 0.01 |
| | | Flooding | 0.40 | | |
| 134: | | | | | |
| Haverson, rarely flooded | 85 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Flooding | 0.40 |
| | | | | Slope | 0.01 |
| | | Flooding | 0.40 | | |
| 135: | | | | | |
| Haxtun | 85 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.01 |

Table 13a.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 136: | | | | | |
| Haxtun, dry | 85 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 137: | | | | | |
| Haxtun, dry | 55 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| Olney | 30 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | Restricted permeability | 0.82 | Slope | 0.01 |
| 138: | | | | | |
| Haxtun | 55 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| Olnest | 30 | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 0.68 | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 139: | | | | | |
| Keith | 85 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Seepage | 0.32 |
| | | | | Slope | 0.01 |
| 140: | | | | | |
| Keith | 85 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Slope | 1.00 |
| | | | | Seepage | 0.32 |
| 141: | | | | | |
| Kim | 90 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Slope | 0.01 |
| 142: | | | | | |
| Kim | 90 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Slope | 1.00 |
| 143: | | | | | |
| Kimst | 90 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Slope | 0.01 |
| 144: | | | | | |
| Kimst | 90 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Slope | 1.00 |

Table 13a.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 145: Las Animas, occasionally flooded | 85 | Very limited: Flooding<br>Depth to saturated zone<br>Filtering capacity | 1.00<br>1.00<br>1.00 | Very limited: Flooding<br>Seepage<br>Depth to saturated zone<br>Slope | 1.00<br>1.00<br>1.00<br>0.01 |
| 146: Limon, rarely flooded | 85 | Very limited: Restricted permeability<br>Flooding | 1.00<br>0.40 | Somewhat limited: Flooding<br>Slope | 0.40<br>0.01 |
| 147: Limon, moist, rarely flooded | 85 | Very limited: Restricted permeability<br>Flooding | 1.00<br>0.40 | Somewhat limited: Flooding<br>Slope | 0.40<br>0.01 |
| 148: Manzanola | 85 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Slope | 0.09 |
| 149: Manzanst, rarely flooded | 90 | Very limited: Restricted permeability<br>Flooding | 1.00<br>0.40 | Somewhat limited: Flooding<br>Slope | 0.40<br>0.01 |
| 150: Manzanst | 85 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Slope | 0.09 |
| 151: Midway | 85 | Very limited: Depth to bedrock | 1.00 | Very limited: Depth to soft bedrock<br>Slope | 1.00<br>0.09 |
| 152: Midway, moist | 85 | Very limited: Depth to bedrock | 1.00 | Very limited: Depth to soft bedrock<br>Slope | 1.00<br>0.09 |
| 153: Midway | 55 | Very limited: Depth to bedrock<br>Slope | 1.00<br>0.16 | Very limited: Depth to soft bedrock<br>Slope | 1.00<br>1.00 |

Table 13a.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 153: | | | | | |
| Razor | 30 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Depth to soft bedrock | 1.00 |
| | | Depth to bedrock | 1.00 | Slope | 1.00 |
| | | Slope | 0.16 | | |
| 154: | | | | | |
| Midway, moist | 55 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | Slope | 0.16 | Slope | 1.00 |
| Razor, moist | 30 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Depth to soft bedrock | 1.00 |
| | | Depth to bedrock | 1.00 | Slope | 1.00 |
| | | Slope | 0.16 | | |
| 155: | | | | | |
| Midway | 55 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 |
| Rock outcrop | 30 | Not rated | | Not rated | |
| 156: | | | | | |
| Midway, moist | 55 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 |
| Rock outcrop, moist | 30 | Not rated | | Not rated | |
| 157: | | | | | |
| Nunn | 85 | Not limited | | Very limited: | |
| | | | | Seepage | 1.00 |
| | | | | Slope | 0.33 |
| 158: | | | | | |
| Nunn | 55 | Not limited | | Very limited: | |
| | | | | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| Sampson, rarely flooded | 30 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Flooding | 0.40 |
| | | Flooding | 0.40 | Seepage | 0.18 |
| | | | | Slope | 0.01 |
| 159: | | | | | |
| Nunn, dry | 50 | Not limited | | Very limited: | |
| | | | | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| Sampson, dry, rarely flooded | 35 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Flooding | 0.40 |
| | | Flooding | 0.40 | Seepage | 0.18 |
| | | | | Slope | 0.01 |

Table 13a.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 160: | | | | | |
| Olnest | 85 | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 0.68 | Seepage | 1.00 |
| | | | | Slope | 0/09 |
| 161: | | | | | |
| Olnest | 85 | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 0.68 | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 162: | | | | | |
| Olnest | 85 | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 0.68 | Seepage | 1.00 |
| | | | | Slope | 0.33 |
| 163: | | | | | |
| Olnest | 90 | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 0.68 | Slope | 1.00 |
| | | | | Seepage | 1.00 |
| | | Slope | 0.04 | | |
| 164: | | | | | |
| Olney | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.09 |
| | | Restricted permeability | 0.82 | | |
| 165: | | | | | |
| Olney | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 166: | | | | | |
| Olney | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.33 |
| 167: | | | | | |
| Olney | 90 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| | | Slope | 0.04 | | |
| 168: | | | | | |
| Olney | 55 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| Midway | 30 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | | | Slope | 1.00 |
| 169: | | | | | |
| Otero | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.01 |

Table 13a.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 170: | | | | | |
| Oterodry | 85 | Not limited | | Very limited: | |
| | | | | Seepage | 1.00 |
| | | | | Slope | 0.09 |
| 171: | | | | | |
| Oterodry | 85 | Not limited | | Very limited: | |
| | | | | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| 172: | | | | | |
| Platner | 85 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Slope | 0.01 |
| 173: | | | | | |
| Platner | 50 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Slope | 0.01 |
| Ascalon | 35 | Not limited | | Very limited: | |
| | | | | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 174: | | | | | |
| Pleasant, rarely ponded | 90 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Depth to saturated zone | 1.00 |
| | | Depth to saturated zone | 1.00 | | |
| 175: | | | | | |
| Rago, rarely flooded | 90 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Flooding | 0.40 |
| | | Flooding | 0.40 | | |
| 176: | | | | | |
| Rago, dry, rarely flooded | 90 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Flooding | 0.40 |
| | | Flooding | 0.40 | | |
| 177: | | | | | |
| Razor | 85 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Depth to soft bedrock | 1.00 |
| | | Depth to bedrock | 1.00 | Slope | 0.09 |
| 178: | | | | | |
| Razor, moist | 85 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Depth to soft bedrock | 1.00 |
| | | Depth to bedrock | 1.00 | Slope | 0.09 |

Table 13a.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 179: | | | | | |
| Sampson, rarely flooded | 90 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Flooding | 0.40 |
| | | Flooding | 0.40 | Seepage | 0.18 |
| 180: | | | | | |
| Sampson, dry, rarely flooded | 90 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Flooding | 0.40 |
| | | Flooding | 0.40 | Seepage | 0.18 |
| 181: | | | | | |
| Satanta | 90 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 182: | | | | | |
| Satanta, dry | 90 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 183: | | | | | |
| Seldom, rarely flooded | 85 | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Seepage | 1.00 |
| | | Restricted permeability | 1.00 | Depth to saturated zone | 1.00 |
| | | Flooding | 0.40 | Flooding | 0.40 |
| | | | | Slope | 0.01 |
| 184: | | | | | |
| Shingle | 55 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | | | Slope | 0.67 |
| Midway | 30 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | | | Slope | 0.67 |
| 185: | | | | | |
| Shingle, moist | 55 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | | | Slope | 0.67 |
| Midway, moist | 30 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | | | Slope | 0.67 |
| 186: | | | | | |
| Sundance | 85 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Seepage | 0.50 |
| | | | | Slope | 0.01 |

Table 13a.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 187: | | | | | |
| Table Mountain, rarely flooded | 85 | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 0.68 | Seepage | 0.50 |
| | | Flooding | 0.40 | Flooding | 0.40 |
| 188: | | | | | |
| Travessilla | 60 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to hard bedrock | 1.00 |
| | | Slope | 1.00 | | |
| | | | | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| Rock outcrop | 25 | Not rated | | Not rated | |
| 189: | | | | | |
| Truckton | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.09 |
| 190: | | | | | |
| Truckton | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| 191: | | | | | |
| Truckton, dry | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.09 |
| 192: | | | | | |
| Truckton, dry | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| 193: | | | | | |
| Valent | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| | | Slope | 0.63 | | |
| 194: | | | | | |
| Valent | 55 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| Bijou | 30 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| 195: | | | | | |
| Valent | 60 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| | | Slope | 0.96 | | |
| Vona | 30 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| | | Slope | 0.04 | | |

Table 13a.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 196: | | | | | |
| Valent | 55 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| | | Slope | 0.96 | | |
| Vonid | 35 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| | | Slope | 0.04 | | |
| 197: | | | | | |
| Vona | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.67 |
| 198: | | | | | |
| Vona | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.09 |
| 199: | | | | | |
| Vona | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| | | Slope | 0.04 | | |
| 200: | | | | | |
| Vona | 35 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| Karval | 30 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Slope | 1.00 |
| | | | | Seepage | 1.00 |
| | | Slope | 1.00 | | |
| Midway, moist | 20 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | Slope | 1.00 | | |
| | | | | Slope | 1.00 |
| 201: | | | | | |
| Vona | 55 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| Midway, moist | 30 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | | | Slope | 1.00 |
| 202: | | | | | |
| Vona | 60 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| | | Slope | 0.96 | | |

Table 13a.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 202: | | | | | |
| Seldom | 20 | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Seepage | 1.00 |
| | | Restricted permeability | 1.00 | Depth to saturated zone | 1.00 |
| | | Slope | 0.96 | Slope | 1.00 |
| 203: | | | | | |
| Vonid | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.67 |
| 204: | | | | | |
| Vonid | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 0.09 |
| 205: | | | | | |
| Vonid | 85 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | Slope | 0.04 | Slope | 1.00 |
| 206: | | | | | |
| Vonid | 35 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| Karval | 30 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Slope | 1.00 |
| | | Slope | 1.00 | Seepage | 1.00 |
| Midway | 20 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 |
| 207: | | | | | |
| Vonid | 55 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| Midway | 30 | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| | | | | Slope | 1.00 |
| 208: | | | | | |
| Vonid | 65 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | Slope | 0.96 | Slope | 1.00 |
| Seldom | 20 | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Seepage | 1.00 |
| | | Restricted permeability | 1.00 | Depth to saturated zone | 1.00 |
| | | Slope | 0.96 | Slope | 1.00 |

Table 13a.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Septic tank absorption fields | | Sewage lagoons | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 209: | | | | | |
| Wages | 85 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Slope | 0.33 |
| | | | | Seepage | 0.18 |
| 210: | | | | | |
| Wages | 85 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Slope | 1.00 |
| | | | | Seepage | 0.18 |
| | | Slope | 0.04 | | |
| 211: | | | | | |
| Wages, dry | 85 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Seepage | 0.18 |
| | | | | Slope | 0.09 |
| 212: | | | | | |
| Wages | 60 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Slope | 1.00 |
| | | | | Seepage | 0.18 |
| | | Slope | 0.37 | | |
| Karval | 25 | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Seepage | 1.00 |
| | | | | Slope | 1.00 |
| | | Slope | 0.37 | | |
| 213: | | | | | |
| Weld | 85 | Very limited: | | Not limited | |
| | | Restricted permeability | 1.00 | | |
| 214: | | | | | |
| Weld, dry | 85 | Very limited: | | Not limited | |
| | | Restricted permeability | 1.00 | | |
| 215: | | | | | |
| Wiley | 85 | Very limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Seepage | 0.32 |
| | | | | Slope | 0.01 |
| 216: | | | | | |
| Wiley | 85 | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Slope | 1.00 |
| | | | | Seepage | 0.32 |
| 217: | | | | | |
| Wilid | 85 | Not limited | | Very limited: | |
| | | | | Seepage | 1.00 |
| | | | | Slope | 0.01 |
| 218: | | | | | |
| Water | 90 | Not rated | | Not rated | |
| 219: | | | | | |
| Gravel pits | 100 | Not rated | | Not rated | |
| 220: | | | | | |
| Access denied | 100 | Not rated | | Not rated | |

Table 13b.--Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

| Map symbol and soil name | Pct. of map unit | Trench sanitary landfill | | Area sanitary landfill | | Daily cover for landfill | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 101: | | | | | | | |
| Apishapa, rarely ponded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Too clayey | 1.00 | | | Too clayey | 1.00 |
| | | | | | | Hard to compact | 1.00 |
| 102: | | | | | | | |
| Arvada | 85 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Hard to compact | 1.00 |
| 103: | | | | | | | |
| Ascalon | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| 104: | | | | | | | |
| Ascalon | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| 105: | | | | | | | |
| Ascalon | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| 106: | | | | | | | |
| Ascalon, dry | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| 107: | | | | | | | |
| Ascalon, dry | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| 108: | | | | | | | |
| Ascalon, dry | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| 109: | | | | | | | |
| Ascalon | 55 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| Haxtun | 30 | Not limited | | Not limited | | Not limited | |
| 110: | | | | | | | |
| Ascalon, dry | 55 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| Haxtun, dry | 30 | Not limited | | Not limited | | Not limited | |
| 111: | | | | | | | |
| Bacid | 85 | Not limited | | Not limited | | Not limited | |

Table 13b.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Trench sanitary landfill | | Area sanitary landfill | | Daily cover for landfill | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 112: | | | | | | | |
| Bankard, occasionally flooded | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Seepage | 1.00 |
| | | Too sandy | 1.00 | | | Too sandy | 0.50 |
| Glenberg, occasionally flooded | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Seepage | 1.00 |
| | | Too sandy | 1.00 | | | Too sandy | 0.50 |
| 113: | | | | | | | |
| Bijou | 90 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| 114: | | | | | | | |
| Bijou, moist | 90 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| 115: | | | | | | | |
| Bijou, moist | 90 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| 116: | | | | | | | |
| Blakeland | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Seepage | 1.00 | Seepage | 1.00 |
| | | Too sandy | 1.00 | | | Too sandy | 0.50 |
| 117: | | | | | | | |
| Bresser | 85 | Very limited: | | Not limited | | Very limited: | |
| | | Too sandy | 1.00 | | | Seepage | 1.00 |
| | | | | | | Too sandy | 0.50 |
| 118: | | | | | | | |
| Campo | 85 | Not limited | | Not limited | | Not limited | |
| 119: | | | | | | | |
| Canyon | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Slope | 1.00 | Depth to bedrock | 1.00 |
| | | Slope | 1.00 | | | Slope | 1.00 |
| Rock outcrop | 35 | Not rated | | Not rated | | Not rated | |
| 120: | | | | | | | |
| Colby | 85 | Not limited | | Not limited | | Not limited | |
| 121: | | | | | | | |
| Colby | 85 | Not limited | | Not limited | | Not limited | |
| 122: | | | | | | | |
| Colby | 50 | Not limited | | Not limited | | Not limited | |
| Weld | 40 | Not limited | | Not limited | | Not limited | |
| 123: | | | | | | | |
| Firstview | 85 | Very limited: | | Not limited | | Somewhat limited: | |
| | | Too sandy | 1.00 | | | Too sandy | 0.50 |

Table 13b.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Trench sanitary landfill | | Area sanitary landfill | | Daily cover for landfill | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 124: | | | | | | | |
| Fort Collins | 90 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| 125: | | | | | | | |
| Fort Collins | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| 126: | | | | | | | |
| Fort Collins | 55 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| Karval | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Too sandy | 1.00 | Slope | 1.00 | Too sandy | 1.00 |
| | | Slope | 1.00 | | | Seepage | 1.00 |
| | | | | | | Slope | 1.00 |
| | | | | | | Gravel content | 0.01 |
| 127: | | | | | | | |
| Fort Collins | 50 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| Platner | 35 | Not limited | | Not limited | | Not limited | |
| 128: | | | | | | | |
| Fort Collins | 50 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| Razor, moist | 40 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Slope | 0.16 | Depth to bedrock | 1.00 |
| | | Slope | 0.16 | | | Hard to compact | 1.00 |
| | | | | | | Slope | 0.16 |
| 129: | | | | | | | |
| Fort | 85 | Not limited | | Not limited | | Not limited | |
| 130: | | | | | | | |
| Fort | 85 | Not limited | | Not limited | | Not limited | |
| 131: | | | | | | | |
| Fort | 55 | Not limited | | Not limited | | Not limited | |
| Karval | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Too sandy | 1.00 | Slope | 1.00 | Too sandy | 1.00 |
| | | Slope | 1.00 | | | Seepage | 1.00 |
| | | | | | | Slope | 1.00 |
| | | | | | | Gravel content | 0.01 |
| 132: | | | | | | | |
| Fort | 50 | Not limited | | Not limited | | Not limited | |
| Razor | 40 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Slope | 0.16 | Depth to bedrock | 1.00 |
| | | Slope | 0.16 | | | Hard to compact | 1.00 |
| | | | | | | Slope | 0.16 |
| 133: | | | | | | | |
| Haversid, rarely flooded | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Flooding | 0.40 | Flooding | 0.40 | | |

Table 13b.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Trench sanitary landfill | | Area sanitary landfill | | Daily cover for landfill | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 134: | | | | | | | |
| Haverson, rarely flooded | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Flooding | 0.40 | Flooding | 0.40 | | |
| 135: | | | | | | | |
| Haxtun | 85 | Not limited | | Not limited | | Not limited | |
| 136: | | | | | | | |
| Haxtun, dry | 85 | Not limited | | Not limited | | Not limited | |
| 137: | | | | | | | |
| Haxtun, dry | 55 | Not limited | | Not limited | | Not limited | |
| Olney | 30 | Not limited | | Not limited | | Not limited | |
| 138: | | | | | | | |
| Haxtun | 55 | Not limited | | Not limited | | Not limited | |
| Olnest | 30 | Not limited | | Not limited | | Not limited | |
| 139: | | | | | | | |
| Keith | 85 | Not limited | | Not limited | | Not limited | |
| 140: | | | | | | | |
| Keith | 85 | Not limited | | Not limited | | Not limited | |
| 141: | | | | | | | |
| Kim | 90 | Not limited | | Not limited | | Not limited | |
| 142: | | | | | | | |
| Kim | 90 | Not limited | | Not limited | | Not limited | |
| 143: | | | | | | | |
| Kimst | 90 | Not limited | | Not limited | | Not limited | |
| 144: | | | | | | | |
| Kimst | 90 | Not limited | | Not limited | | Not limited | |
| 145: | | | | | | | |
| Las Animas, occasionally flooded | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Seepage | 1.00 |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 0.86 |
| | | Seepage | 1.00 | Seepage | 1.00 | | |
| 146: | | | | | | | |
| Limon, rarely flooded | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Flooding | 0.40 | Flooding | 0.40 | Hard to compact | 1.00 |
| 147: | | | | | | | |
| Limon, moist, rarely flooded | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Flooding | 0.40 | Flooding | 0.40 | Hard to compact | 1.00 |
| 148: | | | | | | | |
| Manzanola | 85 | Not limited | | Not limited | | Not limited | |

Table 13b.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Trench sanitary landfill | | Area sanitary landfill | | Daily cover for landfill | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 149: | | | | | | | |
| Manzanst, rarely flooded | 90 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Flooding | 0.40 | Flooding | 0.40 | | |
| 150: | | | | | | | |
| Manzanst | 85 | Not limited | | Not limited | | Not limited | |
| 151: | | | | | | | |
| Midway | 85 | Very limited: | | Not limited | | Very limited: | |
| | | Depth to bedrock | 1.00 | | | Depth to bedrock | 1.00 |
| 152: | | | | | | | |
| Midway, moist | 85 | Very limited: | | Not limited | | Very limited: | |
| | | Depth to bedrock | 1.00 | | | Depth to bedrock | 1.00 |
| 153: | | | | | | | |
| Midway | 55 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Slope | 0.16 | Depth to bedrock | 1.00 |
| | | Slope | 0.16 | | | Slope | 0.16 |
| Razor | 30 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Slope | 0.16 | Depth to bedrock | 1.00 |
| | | Slope | 0.16 | | | Hard to compact | 1.00 |
| | | | | | | Slope | 0.16 |
| 154: | | | | | | | |
| Midway, moist | 55 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Slope | 0.16 | Depth to bedrock | 1.00 |
| | | Slope | 0.16 | | | Slope | 0.16 |
| Razor, moist | 30 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Slope | 0.16 | Depth to bedrock | 1.00 |
| | | Slope | 0.16 | | | Hard to compact | 1.00 |
| | | | | | | Slope | 0.16 |
| 155: | | | | | | | |
| Midway | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Slope | 1.00 | Depth to bedrock | 1.00 |
| | | Slope | 1.00 | | | Slope | 1.00 |
| Rock outcrop | 30 | Not rated | | Not rated | | Not rated | |
| 156: | | | | | | | |
| Midway, moist | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Slope | 1.00 | Depth to bedrock | 1.00 |
| | | Slope | 1.00 | | | Slope | 1.00 |
| Rock outcrop, moist | 30 | Not rated | | Not rated | | Not rated | |
| 157: | | | | | | | |
| Nunn | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.15 |
| 158: | | | | | | | |
| Nunn | 55 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.15 |

Table 13b.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Trench sanitary landfill | | Area sanitary landfill | | Daily cover for landfill | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 158: | | | | | | | |
| Sampson, rarely flooded | 30 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Too clayey | 0.50 | Flooding | 0.40 | Too clayey | 0.50 |
| | | Flooding | 0.40 | | | | |
| 159: | | | | | | | |
| Nunn, dry | 50 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.15 |
| Sampson, dry, rarely flooded | 35 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Too clayey | 0.50 | Flooding | 0.40 | Too clayey | 0.50 |
| | | Flooding | 0.40 | | | | |
| 160: | | | | | | | |
| Olnest | 85 | Not limited | | Not limited | | Not limited | |
| 161: | | | | | | | |
| Olnest | 85 | Not limited | | Not limited | | Not limited | |
| 162: | | | | | | | |
| Olnest | 85 | Not limited | | Not limited | | Not limited | |
| 163: | | | | | | | |
| Olnest | 90 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Slope | 0.04 | Slope | 0.04 | Slope | 0.04 |
| 164: | | | | | | | |
| Olney | 85 | Not limited | | Not limited | | Not limited | |
| 165: | | | | | | | |
| Olney | 85 | Very limited: | | Not limited | | Very limited: | |
| | | Too sandy | 1.00 | | | Seepage | 1.00 |
| | | | | | | Too sandy | 0.50 |
| 166: | | | | | | | |
| Olney | 85 | Very limited: | | Not limited | | Very limited: | |
| | | Too sandy | 1.00 | | | Seepage | 1.00 |
| | | | | | | Too sandy | 0.50 |
| 167: | | | | | | | |
| Olney | 90 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Too sandy | 1.00 | Slope | 0.04 | Seepage | 1.00 |
| | | Slope | 0.04 | | | Too sandy | 0.50 |
| | | | | | | Slope | 0.04 |
| 168: | | | | | | | |
| Olney | 55 | Very limited: | | Not limited | | Very limited: | |
| | | Too sandy | 1.00 | | | Seepage | 1.00 |
| | | | | | | Too sandy | 0.50 |
| Midway | 30 | Very limited: | | Not limited | | Very limited: | |
| | | Depth to bedrock | 1.00 | | | Depth to bedrock | 1.00 |
| 169: | | | | | | | |
| Otero | 85 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Seepage | 1.00 |

Table 13b.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Trench sanitary landfill | | Area sanitary landfill | | Daily cover for landfill | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 170: | | | | | | | |
| Oterodry | 85 | Not limited | | Not limited | | Somewhat limited: Seepage | 0.50 |
| 171: | | | | | | | |
| Oterodry | 85 | Not limited | | Not limited | | Somewhat limited: Seepage | 0.50 |
| 172: | | | | | | | |
| Platner | 85 | Not limited | | Not limited | | Not limited | |
| 173: | | | | | | | |
| Platner | 50 | Not limited | | Not limited | | Not limited | |
| Ascalon | 35 | Not limited | | Not limited | | Somewhat limited: Seepage | 0.21 |
| 174: | | | | | | | |
| Pleasant, rarely ponded | 90 | Very limited: Depth to saturated zone<br>Too clayey | 1.00<br>1.00 | Very limited: Depth to saturated zone | 1.00 | Very limited: Depth to saturated zone<br>Too clayey<br>Hard to compact | 1.00<br>1.00<br>1.00 |
| 175: | | | | | | | |
| Rago, rarely flooded | 90 | Very limited: Too clayey<br>Flooding | 1.00<br>0.40 | Somewhat limited: Flooding | 0.40 | Very limited: Too clayey | 1.00 |
| 176: | | | | | | | |
| Rago, dry, rarely flooded | 90 | Very limited: Too clayey<br>Flooding | 1.00<br>0.40 | Somewhat limited: Flooding | 0.40 | Very limited: Too clayey | 1.00 |
| 177: | | | | | | | |
| Razor | 85 | Very limited: Depth to bedrock | 1.00 | Not limited | | Very limited: Depth to bedrock<br>Hard to compact | 1.00<br>1.00 |
| 178: | | | | | | | |
| Razor, moist | 85 | Very limited: Depth to bedrock | 1.00 | Not limited | | Very limited: Depth to bedrock<br>Hard to compact | 1.00<br>1.00 |
| 179: | | | | | | | |
| Sampson, rarely flooded | 90 | Somewhat limited: Too clayey<br>Flooding | 0.50<br>0.40 | Somewhat limited: Flooding | 0.40 | Somewhat limited: Too clayey | 0.50 |
| 180: | | | | | | | |
| Sampson, dry, rarely flooded | 90 | Somewhat limited: Too clayey<br>Flooding | 0.50<br>0.40 | Somewhat limited: Flooding | 0.40 | Somewhat limited: Too clayey | 0.50 |
| 181: | | | | | | | |
| Satanta | 90 | Not limited | | Not limited | | Somewhat limited: Seepage | 0.50 |

Table 13b.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Trench sanitary landfill | | Area sanitary landfill | | Daily cover for landfill | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 182: | | | | | | | |
| Satanta, dry-------- | 90 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.50 |
| 183: | | | | | | | |
| Seldom, rarely flooded---------- | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Flooding | 0.40 | Seepage | 1.00 | Seepage | 0.21 |
| | | | | Flooding | 0.40 | | |
| 184: | | | | | | | |
| Shingle---------- | 55 | Very limited: | | Not limited | | Very limited: | |
| | | Depth to bedrock | 1.00 | | | Depth to bedrock | 1.00 |
| Midway---------- | 30 | Very limited: | | Not limited | | Very limited: | |
| | | Depth to bedrock | 1.00 | | | Depth to bedrock | 1.00 |
| 185: | | | | | | | |
| Shingle, moist------ | 55 | Very limited: | | Not limited | | Very limited: | |
| | | Depth to bedrock | 1.00 | | | Depth to bedrock | 1.00 |
| Midway, moist------- | 30 | Very limited: | | Not limited | | Very limited: | |
| | | Depth to bedrock | 1.00 | | | Depth to bedrock | 1.00 |
| 186: | | | | | | | |
| Sundance---------- | 85 | Not limited | | Not limited | | Not limited | |
| 187: | | | | | | | |
| Table Mountain, rarely flooded----- | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Flooding | 0.40 | Flooding | 0.40 | | |
| 188: | | | | | | | |
| Travessilla--------- | 60 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Slope | 1.00 | Depth to bedrock | 1.00 |
| | | Slope | 1.00 | | | Slope | 1.00 |
| | | | | | | Seepage | 0.21 |
| Rock outcrop-------- | 25 | Not rated | | Not rated | | Not rated | |
| 189: | | | | | | | |
| Truckton---------- | 85 | Very limited: | | Not limited | | Very limited: | |
| | | Too sandy | 1.00 | | | Seepage | 1.00 |
| | | | | | | Too sandy | 0.50 |
| 190: | | | | | | | |
| Truckton---------- | 85 | Very limited: | | Not limited | | Very limited: | |
| | | Too sandy | 1.00 | | | Seepage | 1.00 |
| | | | | | | Too sandy | 0.50 |
| 191: | | | | | | | |
| Truckton, dry------- | 85 | Very limited: | | Not limited | | Very limited: | |
| | | Too sandy | 1.00 | | | Seepage | 1.00 |
| | | | | | | Too sandy | 0.50 |
| 192: | | | | | | | |
| Truckton, dry------- | 85 | Very limited: | | Not limited | | Very limited: | |
| | | Too sandy | 1.00 | | | Seepage | 1.00 |
| | | | | | | Too sandy | 0.50 |

Table 13b.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Trench sanitary landfill | | Area sanitary landfill | | Daily cover for landfill | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 193: | | | | | | | |
| Valent | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Too sandy | 1.00 | Slope | 0.63 | Too sandy | 1.00 |
| | | Slope | 0.63 | | | Seepage | 1.00 |
| | | | | | | Slope | 0.63 |
| 194: | | | | | | | |
| Valent | 55 | Very limited: | | Not limited | | Very limited: | |
| | | Too sandy | 1.00 | | | Too sandy | 1.00 |
| | | | | | | Seepage | 1.00 |
| Bijou | 30 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| 195: | | | | | | | |
| Valent | 60 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Too sandy | 1.00 | Slope | 0.96 | Too sandy | 1.00 |
| | | Slope | 0.96 | | | Seepage | 1.00 |
| | | | | | | Slope | 0.96 |
| Vona | 30 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Too sandy | 1.00 | Slope | 0.04 | Seepage | 1.00 |
| | | Slope | 0.04 | | | Too sandy | 0.50 |
| | | | | | | Slope | 0.04 |
| 196: | | | | | | | |
| Valent | 55 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Too sandy | 1.00 | Slope | 0.96 | Too sandy | 1.00 |
| | | Slope | 0.96 | | | Seepage | 1.00 |
| | | | | | | Slope | 0.96 |
| Vonid | 35 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Slope | 0.04 | Slope | 0.04 | Seepage | 0.50 |
| | | | | | | Slope | 0.04 |
| 197: | | | | | | | |
| Vona | 85 | Very limited: | | Not limited | | Very limited: | |
| | | Too sandy | 1.00 | | | Seepage | 1.00 |
| | | | | | | Too sandy | 0.50 |
| 198: | | | | | | | |
| Vona | 85 | Very limited: | | Not limited | | Very limited: | |
| | | Too sandy | 1.00 | | | Seepage | 1.00 |
| | | | | | | Too sandy | 0.50 |
| 199: | | | | | | | |
| Vona | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Too sandy | 1.00 | Slope | 0.04 | Seepage | 1.00 |
| | | Slope | 0.04 | | | Too sandy | 0.50 |
| | | | | | | Slope | 0.04 |
| 200: | | | | | | | |
| Vona | 35 | Very limited: | | Not limited | | Very limited: | |
| | | Too sandy | 1.00 | | | Seepage | 1.00 |
| | | | | | | Too sandy | 0.50 |
| Karval | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Too sandy | 1.00 | Slope | 1.00 | Too sandy | 1.00 |
| | | Slope | 1.00 | | | Seepage | 1.00 |
| | | | | | | Slope | 1.00 |
| | | | | | | Gravel content | 0.01 |

Table 13b.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Trench sanitary landfill | | Area sanitary landfill | | Daily cover for landfill | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 200: | | | | | | | |
| Midway, moist | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Slope | 1.00 | Depth to bedrock | 1.00 |
| | | Slope | 1.00 | | | Slope | 1.00 |
| 201: | | | | | | | |
| Vona | 55 | Very limited: | | Not limited | | Very limited: | |
| | | Too sandy | 1.00 | | | Seepage | 1.00 |
| | | | | | | Too sandy | 0.50 |
| Midway, moist | 30 | Very limited: | | Not limited | | Very limited: | |
| | | Depth to bedrock | 1.00 | | | Depth to bedrock | 1.00 |
| 202: | | | | | | | |
| Vona | 60 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Too sandy | 1.00 | Slope | 0.96 | Seepage | 1.00 |
| | | Slope | 0.96 | | | Slope | 0.96 |
| | | | | | | Too sandy | 0.50 |
| Seldom | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Slope | 0.96 | Seepage | 1.00 | Slope | 0.96 |
| | | | | Slope | 0.96 | Seepage | 0.21 |
| 203: | | | | | | | |
| Vonid | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.50 |
| 204: | | | | | | | |
| Vonid | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.50 |
| 205: | | | | | | | |
| Vonid | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Slope | 0.04 | Slope | 0.04 | Seepage | 0.50 |
| | | | | | | Slope | 0.04 |
| 206: | | | | | | | |
| Vonid | 35 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.50 |
| Karval | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Too sandy | 1.00 | Slope | 1.00 | Too sandy | 1.00 |
| | | Slope | 1.00 | | | Seepage | 1.00 |
| | | | | | | Slope | 1.00 |
| | | | | | | Gravel content | 0.01 |
| Midway | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Slope | 1.00 | Depth to bedrock | 1.00 |
| | | Slope | 1.00 | | | Slope | 1.00 |
| 207: | | | | | | | |
| Vonid | 55 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.50 |
| Midway | 30 | Very limited: | | Not limited | | Very limited: | |
| | | Depth to bedrock | 1.00 | | | Depth to bedrock | 1.00 |

Table 13b.--Sanitary Facilities--Continued

| Map symbol and soil name | Pct. of map unit | Trench sanitary landfill | | Area sanitary landfill | | Daily cover for landfill | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 208: | | | | | | | |
| Vonid | 65 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Slope | 0.96 | Slope | 0.96 | Slope | 0.96 |
| | | | | | | Seepage | 0.50 |
| Seldom | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Slope | 0.96 | Seepage | 1.00 | Slope | 0.96 |
| | | | | Slope | 0.96 | Seepage | 0.21 |
| 209: | | | | | | | |
| Wages | 85 | Not limited | | Not limited | | Not limited | |
| 210: | | | | | | | |
| Wages | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Slope | 0.04 | Slope | 0.04 | Slope | 0.04 |
| 211: | | | | | | | |
| Wages, dry | 85 | Not limited | | Not limited | | Not limited | |
| 212: | | | | | | | |
| Wages | 60 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Slope | 0.37 | Slope | 0.37 | Slope | 0.37 |
| Karval | 25 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Too sandy | 1.00 | Slope | 0.37 | Too sandy | 1.00 |
| | | Slope | 0.37 | | | Seepage | 1.00 |
| | | | | | | Slope | 0.37 |
| | | | | | | Gravel content | 0.01 |
| 213: | | | | | | | |
| Weld | 85 | Not limited | | Not limited | | Not limited | |
| 214: | | | | | | | |
| Weld, dry | 85 | Not limited | | Not limited | | Not limited | |
| 215: | | | | | | | |
| Wiley | 85 | Not limited | | Not limited | | Not limited | |
| 216: | | | | | | | |
| Wiley | 85 | Not limited | | Not limited | | Not limited | |
| 217: | | | | | | | |
| Wilid | 85 | Not limited | | Not limited | | Somewhat limited: | |
| | | | | | | Seepage | 0.21 |
| 218: | | | | | | | |
| Water | 90 | Not rated | | Not rated | | Not rated | |
| 219: | | | | | | | |
| Gravel pits | 100 | Not rated | | Not rated | | Not rated | |
| 220: | | | | | | | |
| Access denied | 100 | Not rated | | Not rated | | Not rated | |

Table 14a.--Agricultural Waste Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 101: Apishapa, rarely ponded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Runoff | 0.40 | | | | |
| | | Salinity | 0.01 | | | | |
| 102: Arvada | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Sodium content | 1.00 | Sodium content | 1.00 | Sodium content | 1.00 |
| | | Runoff | 0.40 | | | | |
| | | Salinity | 0.01 | | | | |
| 103: Ascalon | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Filtering capacity | 0.01 |
| 104: Ascalon | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Too steep for surface application | 0.08 |
| | | | | | | Filtering capacity | 0.01 |
| 105: Ascalon | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Too steep for surface application | 0.91 |
| | | | | | | Too steep for sprinkler application | 0.02 |
| | | | | | | Filtering capacity | 0.01 |
| 106: Ascalon, dry | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Filtering capacity | 0.01 |
| 107: Ascalon, dry | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Too steep for surface application | 0.08 |
| | | | | | | Filtering capacity | 0.01 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 108: | | | | | | | |
| Ascalon, dry | 85 | Somewhat limited: Filtering capacity | 0.01 | Somewhat limited: Filtering capacity | 0.01 | Somewhat limited: Too steep for surface application | 0.91 |
| | | | | | | Too steep for sprinkler application | 0.02 |
| | | | | | | Filtering capacity | 0.01 |
| 109: | | | | | | | |
| Ascalon | 55 | Somewhat limited: Filtering capacity | 0.01 | Somewhat limited: Filtering capacity | 0.01 | Somewhat limited: Filtering capacity | 0.01 |
| Haxtun | 30 | Very limited: Filtering capacity | 1.00 | Very limited: Filtering capacity | 1.00 | Very limited: Filtering capacity | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 110: | | | | | | | |
| Ascalon, dry | 55 | Somewhat limited: Filtering capacity | 0.01 | Somewhat limited: Filtering capacity | 0.01 | Somewhat limited: Filtering capacity | 0.01 |
| Haxtun, dry | 30 | Very limited: Filtering capacity | 1.00 | Very limited: Filtering capacity | 1.00 | Very limited: Filtering capacity | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 111: | | | | | | | |
| Bacid | 85 | Very limited: Restricted permeability | 1.00 | Very limited: Restricted permeability | 1.00 | Very limited: Restricted permeability | 1.00 |
| 112: | | | | | | | |
| Bankard, occasionally flooded | 55 | Very limited: Filtering capacity | 1.00 | Very limited: Filtering capacity | 1.00 | Very limited: Filtering capacity | 1.00 |
| | | Flooding | 1.00 | Flooding | 1.00 | Droughty | 0.89 |
| | | Droughty | 0.89 | Droughty | 0.89 | Flooding | 0.60 |
| | | Leaching | 0.45 | | | | |
| Glenberg, occasionally flooded | 30 | Very limited: Filtering capacity | 1.00 | Very limited: Filtering capacity | 1.00 | Very limited: Filtering capacity | 1.00 |
| | | Flooding | 1.00 | Flooding | 1.00 | Flooding | 0.60 |
| | | Droughty | 0.01 | Droughty | 0.01 | Droughty | 0.01 |
| 113: | | | | | | | |
| Bijou | 90 | Very limited: Filtering capacity | 1.00 | Very limited: Filtering capacity | 1.00 | Very limited: Filtering capacity | 1.00 |
| | | Droughty | 0.03 | Droughty | 0.03 | Droughty | 0.03 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 114: | | | | | | | |
| Bijou, moist | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 0.03 | Droughty | 0.03 | Droughty | 0.03 |
| 115: | | | | | | | |
| Bijou, moist | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 0.03 | Droughty | 0.03 | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| | | | | | | Droughty | 0.03 |
| 116: | | | | | | | |
| Blakeland | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 0.65 | Droughty | 0.65 | Too steep for surface application | 1.00 |
| | | Leaching | 0.45 | | | Droughty | 0.65 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| 117: | | | | | | | |
| Bresser | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 0.30 | Droughty | 0.30 | Droughty | 0.30 |
| 118: | | | | | | | |
| Campo | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 119: | | | | | | | |
| Canyon | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Droughty | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | | |
| | | Runoff | 0.40 | Filtering capacity | 0.01 | Too steep for sprinkler application | 1.00 |
| | | | | | | Restricted permeability | 0.96 |
| Rock outcrop | 35 | Not rated | | Not rated | | Not rated | |
| 120: | | | | | | | |
| Colby | 85 | Not limited | | Not limited | | Not limited | |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 121: | | | | | | | |
| Colby | 85 | Not limited | | Not limited | | Very limited: | |
| | | | | | | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| 122: | | | | | | | |
| Colby | 50 | Not limited | | Not limited | | Not limited | |
| Weld | 40 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 123: | | | | | | | |
| Firstview | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Sodium content | 1.00 | Sodium content | 1.00 | Sodium content | 1.00 |
| | | Salinity | 0.01 | Filtering capacity | 0.01 | Filtering capacity | 0.01 |
| | | Filtering capacity | 0.01 | | | | |
| 124: | | | | | | | |
| Fort Collins | 90 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 125: | | | | | | | |
| Fort Collins | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | | | | | Too steep for surface application | 0.08 |
| 126: | | | | | | | |
| Fort Collins | 55 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | | | | | Restricted permeability | 0.96 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| Karval | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 1.00 | Droughty | 1.00 | Too steep for surface application | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 | Droughty | 1.00 |
| | | Leaching | 0.45 | Too acid | 0.42 | Too steep for sprinkler application | 1.00 |
| | | Too acid | 0.11 | | | Too acid | 0.42 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 127: | | | | | | | |
| Fort Collins | 50 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability | 0.96 | Somewhat limited: Restricted permeability | 0.96 |
| Platner | 35 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability | 0.96 | Somewhat limited: Restricted permeability | 0.96 |
| 128: | | | | | | | |
| Fort Collins | 50 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability | 0.96 | Very limited: Too steep for surface application | 1.00 |
| | | | | | | Restricted permeability | 0.96 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| Razor, moist | 40 | Very limited: Restricted permeability | 1.00 | Very limited: Restricted permeability | 1.00 | Very limited: Restricted permeability | 1.00 |
| | | Depth to bedrock | 0.42 | Depth to bedrock | 0.42 | Too steep for surface application | 1.00 |
| | | Droughty | 0.32 | Droughty | 0.32 | | |
| | | Slope | 0.16 | Slope | 0.16 | | |
| | | Sodium content | 0.08 | Sodium content | 0.08 | Depth to bedrock | 0.42 |
| | | | | | | Too steep for sprinkler application | 0.39 |
| | | | | | | Droughty | 0.32 |
| 129: | | | | | | | |
| Fort | 85 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability | 0.96 | Somewhat limited: Restricted permeability | 0.96 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Sodium content | 0.50 |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Filtering capacity | 0.01 |
| 130: | | | | | | | |
| Fort | 85 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability | 0.96 | Somewhat limited: Restricted permeability | 0.96 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Sodium content | 0.50 |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Too steep for surface application | 0.08 |
| | | | | | | Filtering capacity | 0.01 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 131: | | | | | | | |
| Fort | 55 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Restricted permeability | 0.96 |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Sodium content | 0.50 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| | | | | | | Filtering capacity | 0.01 |
| Karval | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 1.00 | Droughty | 1.00 | Too steep for surface application | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 | Droughty | 1.00 |
| | | Leaching | 0.45 | Too acid | 0.42 | Too steep for sprinkler application | 1.00 |
| | | Too acid | 0.11 | | | Too acid | 0.42 |
| 132: | | | | | | | |
| Fort | 50 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Restricted permeability | 0.96 |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Sodium content | 0.50 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| | | | | | | Filtering capacity | 0.01 |
| Razor | 40 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 0.42 | Depth to bedrock | 0.42 | Too steep for surface application | 1.00 |
| | | Droughty | 0.32 | Droughty | 0.32 | Depth to bedrock | 0.42 |
| | | Slope | 0.16 | Sloope | 0.16 | Too steep for sprinkler application | 0.39 |
| | | Sodium content | 0.08 | Sodium content | 0.08 | Droughty | 0.32 |
| 133: | | | | | | | |
| Haversid, rarely flooded | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | Flooding | 0.40 | Flooding | 0.40 | Sodium content | 0.08 |
| | | Sodium content | 0.08 | Sodium content | 0.08 | | |
| | | Salinity | 0.01 | | | | |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 134: | | | | | | | |
| Haverson, rarely flooded | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | Flooding | 0.40 | Flooding | 0.40 | | |
| | | Salinity | 0.06 | | | | |
| 135: | | | | | | | |
| Haxtun | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 136: | | | | | | | |
| Haxtun, dry | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 137: | | | | | | | |
| Haxtun, dry | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| Olney | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 138: | | | | | | | |
| Haxtun | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| Olnest | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| 139: | | | | | | | |
| Keith | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 140: | | | | | | | |
| Keith | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | | | | | Too steep for surface application | 0.91 |
| | | | | | | Too steep for sprinkler application | 0.02 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 141: | | | | | | | |
| Kim | 90 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 142: | | | | | | | |
| Kim | 90 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | | | | | Restricted permeability | 0.96 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| 143: | | | | | | | |
| Kimst | 90 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 144: | | | | | | | |
| Kimst | 90 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | | | | | Restricted permeability | 0.96 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| 145: | | | | | | | |
| Las Animas, occasionally flooded | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 1.00 | Depth to saturated zone | 1.00 |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Flooding | 0.60 |
| | | Runoff | 0.40 | Filtering capacity | 0.01 | Filtering capacity | 0.01 |
| | | Salinity | 0.01 | | | | |
| | | Filtering capacity | 0.01 | | | | |
| 146: | | | | | | | |
| Limon, rarely flooded | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Flooding | 0.40 | Flooding | 0.40 | Salinity | 0.13 |
| | | Sodium content | 0.08 | Salinity | 0.13 | Sodium content | 0.08 |
| | | Salinity | 0.01 | Sodium content | 0.08 | | |
| 147: | | | | | | | |
| Limon, moist, rarely flooded | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Flooding | 0.40 | Flooding | 0.40 | Salinity | 0.13 |
| | | Sodium content | 0.08 | Salinity | 0.13 | Sodium content | 0.08 |
| | | Salinity | 0.01 | Sodium content | 0.08 | | |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 148: | | | | | | | |
| Manzanola | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| 149: | | | | | | | |
| Manzanst, rarely flooded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Flooding | 0.40 | Flooding | 0.40 | Sodium content | 0.18 |
| | | Sodium content | 0.18 | Sodium content | 0.18 | | |
| 150: | | | | | | | |
| Manzanst | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Sodium content | 0.18 | Sodium content | 0.18 | Sodium content | 0.18 |
| 151: | | | | | | | |
| Midway | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Droughty | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Sodium content | 0.50 |
| | | Runoff | 0.40 | | | | |
| 152: | | | | | | | |
| Midway, moist | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Droughty | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Sodium content | 0.50 |
| | | Runoff | 0.40 | | | | |
| 153: | | | | | | | |
| Midway | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Droughty | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Too steep for surface application | 1.00 |
| | | Runoff | 0.40 | Slope | 0.16 | | |
| | | | | | | Sodium content | 0.50 |
| Razor | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 0.42 | Depth to bedrock | 0.42 | Too steep for surface application | 1.00 |
| | | Droughty | 0.32 | Droughty | 0.32 | | |
| | | Slope | 0.16 | Slope | 0.16 | Depth to bedrock | 0.42 |
| | | Sodium content | 0.08 | Sodium content | 0.08 | Too steep for sprinkler application | 0.39 |
| | | | | | | Droughty | 0.32 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 154: | | | | | | | |
| Midway, moist------- | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Droughty | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Too steep for surface application | 1.00 |
| | | Runoff | 0.40 | Slope | 0.16 | | |
| | | | | | | Sodium content | 0.50 |
| Razor, moist-------- | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 0.42 | Depth to bedrock | 0.42 | Too steep for surface application | 1.00 |
| | | Droughty | 0.32 | Droughty | 0.32 | | |
| | | Slope | 0.16 | Slope | 0.16 | Depth to bedrock | 0.42 |
| | | Sodium content | 0.08 | Sodium content | 0.08 | Too steep for sprinkler application | 0.39 |
| | | | | | | Droughty | 0.32 |
| 155: | | | | | | | |
| Midway-------------- | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Droughty | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | | |
| | | | | | | Too steep for sprinkler application | 1.00 |
| Rock outcrop-------- | 30 | Not rated | | Not rated | | Not rated | |
| 156: | | | | | | | |
| Midway, moist------- | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Droughty | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | | |
| | | | | | | Too steep for sprinkler application | 1.00 |
| Rock outcrop, moist- | 30 | Not rated | | Not rated | | Not rated | |
| 157: | | | | | | | |
| Nunn---------------- | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | | | | | Too steep for surface application | 0.08 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 158: | | | | | | | |
| Nunn | 55 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability | 0.96 | Somewhat limited: Restricted permeability | 0.96 |
| Sampson, rarely flooded | 30 | Very limited: Restricted permeability; Flooding | 1.00; 0.40 | Somewhat limited: Restricted permeability; Flooding | 0.96; 0.40 | Somewhat limited: Restricted permeability | 0.96 |
| 159: | | | | | | | |
| Nunn, dry | 50 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability | 0.96 | Somewhat limited: Restricted permeability | 0.96 |
| Sampson, dry, rarely flooded | 35 | Very limited: Restricted permeability; Flooding | 1.00; 0.40 | Somewhat limited: Restricted permeability; Flooding | 0.96; 0.40 | Somewhat limited: Restricted permeability | 0.96 |
| 160: | | | | | | | |
| Olnest | 85 | Very limited: Filtering capacity | 1.00 | Very limited: Filtering capacity | 1.00 | Very limited: Filtering capacity | 1.00 |
| 161: | | | | | | | |
| Olnest | 85 | Somewhat limited: Filtering capacity | 0.01 | Somewhat limited: Filtering capacity | 0.01 | Somewhat limited: Filtering capacity | 0.01 |
| 162: | | | | | | | |
| Olnest | 85 | Somewhat limited: Filtering capacity | 0.01 | Somewhat limited: Filtering capacity | 0.01 | Somewhat limited: Too steep for surface application; Filtering capacity | 0.08; 0.01 |
| 163: | | | | | | | |
| Olnest | 90 | Somewhat limited: Slope; Filtering capacity | 0.04; 0.01 | Somewhat limited: Slope; Filtering capacity | 0.04; 0.01 | Very limited: Too steep for surface application; Too steep for sprinkler application; Filtering capacity | 1.00; 0.22; 0.01 |
| 164: | | | | | | | |
| Olney | 85 | Very limited: Filtering capacity; Restricted permeability | 1.00; 1.00 | Very limited: Filtering capacity; Restricted permeability | 1.00; 0.96 | Very limited: Filtering capacity; Restricted permeability | 1.00; 0.96 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 165: | | | | | | | |
| Olney | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 166: | | | | | | | |
| Olney | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | | | | | Too steep for surface application | 0.08 |
| 167: | | | | | | | |
| Olney | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | Slope | 0.04 | Slope | 0.04 | | |
| | | | | | | Restricted permeability | 0.96 |
| | | | | | | Too steep for sprinkler application | 0.22 |
| 168: | | | | | | | |
| Olney | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | | | | | Restricted permeability | 0.96 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| Midway | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Droughty | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Too steep for surface application | 1.00 |
| | | Runoff | 0.40 | | | | |
| | | | | | | Sodium content | 0.50 |
| 169: | | | | | | | |
| Otero | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Filtering capacity | 0.01 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 170: | | | | | | | |
| Oterodry | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Filtering capacity | 0.01 |
| 171: | | | | | | | |
| Oterodry | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Too steep for surface application | 0.91 |
| | | | | | | Too steep for sprinkler application | 0.02 |
| | | | | | | Filtering capacity | 0.01 |
| 172: | | | | | | | |
| Platner | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 173: | | | | | | | |
| Platner | 50 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| Ascalon | 35 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Filtering capacity | 0.01 |
| 174: | | | | | | | |
| Pleasant, rarely ponded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Runoff | 0.40 | | | | |
| 175: | | | | | | | |
| Rago, rarely flooded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Flooding | 0.40 | Flooding | 0.40 | | |
| 176: | | | | | | | |
| Rago, dry, rarely Flooded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Flooding | 0.40 | Flooding | 0.40 | | |
| 177: | | | | | | | |
| Razor | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Sodium content | 1.00 | Sodium content | 1.00 | Sodium content | 1.00 |
| | | Droughty | 0.43 | Droughty | 0.43 | Droughty | 0.43 |
| | | Depth to bedrock | 0.42 | Depth to bedrock | 0.42 | Depth to bedrock | 0.42 |
| | | Salinity | 0.06 | | | | |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 178: | | | | | | | |
| Razor, moist | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Sodium content | 1.00 | Sodium content | 1.00 | Sodium content | 1.00 |
| | | Droughty | 0.43 | Droughty | 0.43 | Droughty | 0.43 |
| | | Depth to bedrock | 0.42 | Depth to bedrock | 0.42 | Depth to bedrock | 0.42 |
| | | Salinity | 0.06 | | | | |
| 179: | | | | | | | |
| Sampson, rarely flooded | 90 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | Flooding | 0.40 | Flooding | 0.40 | | |
| 180: | | | | | | | |
| Sampson, dry, rarely flooded | 90 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | Flooding | 0.40 | Flooding | 0.40 | | |
| 181: | | | | | | | |
| Satanta | 90 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Filtering capacity | 0.01 |
| 182: | | | | | | | |
| Satanta, dry | 90 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Filtering capacity | 0.01 |
| 183: | | | | | | | |
| Seldom, rarely flooded | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | Flooding | 0.40 | Flooding | 0.40 | Filtering capacity | 0.01 |
| | | Runoff | 0.40 | Filtering capacity | 0.01 | | |
| | | Filtering capacity | 0.01 | | | | |
| 184: | | | | | | | |
| Shingle | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Droughty | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | Runoff | 0.40 | | | Too steep for surface application | 0.31 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 184: | | | | | | | |
| Midway | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Droughty | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Sodium content | 0.50 |
| | | Runoff | 0.40 | | | Too steep for surface application | 0.31 |
| 185: | | | | | | | |
| Shingle, moist | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Droughty | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | Runoff | 0.40 | | | Too steep for surface application | 0.31 |
| Midway, moist | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Droughty | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Sodium content | 0.50 |
| | | Runoff | 0.40 | | | Too steep for surface application | 0.31 |
| 186: | | | | | | | |
| Sundance | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 187: | | | | | | | |
| Table Mountain, rarely flooded | 85 | Somewhat limited: | | Somewhat limited: | | Not limited | |
| | | Flooding | 0.40 | Flooding | 0.40 | | |
| 188: | | | | | | | |
| Travessilla | 60 | Very limited: | | Very limited: | | Very limited: | |
| | | Droughty | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Runoff | 0.40 | Filtering capacity | 0.01 | | |
| | | Filtering capacity | 0.01 | | | Too steep for sprinkler application | 1.00 |
| | | | | | | Filtering capacity | 0.01 |
| Rock outcrop | 25 | Not rated | | Not rated | | Not rated | |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 189: | | | | | | | |
| Truckton | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 0.42 | Droughty | 0.42 | Droughty | 0.42 |
| 190: | | | | | | | |
| Truckton | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 0.42 | Droughty | 0.42 | Too steep for surface application | 0.91 |
| | | | | | | Droughty | 0.42 |
| | | | | | | Too steep for sprinkler application | 0.02 |
| 191: | | | | | | | |
| Truckton, dry | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 0.42 | Droughty | 0.42 | Droughty | 0.42 |
| 192: | | | | | | | |
| Truckton, dry | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 0.42 | Droughty | 0.42 | Too steep for surface application | 0.91 |
| | | | | | | Droughty | 0.42 |
| | | | | | | Too steep for sprinkler application | 0.02 |
| 193: | | | | | | | |
| Valent | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 0.65 | Droughty | 0.65 | Too steep for surface application | 1.00 |
| | | Slope | 0.63 | Slope | 0.63 | | |
| | | Leaching | 0.45 | | | Too steep for sprinkler application | 0.77 |
| | | | | | | Droughty | 0.65 |
| 194: | | | | | | | |
| Valent | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 0.65 | Droughty | 0.65 | Too steep for surface application | 0.91 |
| | | Leaching | 0.45 | | | Droughty | 0.65 |
| | | | | | | Too steep for sprinkler application | 0.02 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 194: | | | | | | | |
| Bijou | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 0.03 | Droughty | 0.03 | Too steep for surface application | 0.91 |
| | | | | | | Droughty | 0.03 |
| | | | | | | Too steep for sprinkler application | 0.02 |
| 195: | | | | | | | |
| Valent | 60 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Slope | 0.96 | Slope | 0.96 | Too steep for surface application | 1.00 |
| | | Droughty | 0.65 | Droughty | 0.65 | Too steep for sprinkler application | 0.97 |
| | | Leaching | 0.45 | | | Droughty | 0.65 |
| Vona | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Slope | 0.04 | Slope | 0.04 | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 0.22 |
| 196: | | | | | | | |
| Valent | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Slope | 0.96 | Slope | 0.96 | Too steep for surface application | 1.00 |
| | | Droughty | 0.65 | Droughty | 0.65 | Too steep for sprinkler application | 0.97 |
| | | Leaching | 0.45 | | | Droughty | 0.65 |
| Vonid | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Slope | 0.04 | Slope | 0.04 | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 0.22 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 197: | | | | | | | |
| Vona | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | | | | | Too steep for surface application | 0.31 |
| 198: | | | | | | | |
| Vona | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Filtering capacity | 0.01 |
| 199: | | | | | | | |
| Vona | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 0.04 | Slope | 0.04 | Too steep for surface application | 1.00 |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Too steep for sprinkler application | 0.22 |
| | | | | | | Filtering capacity | 0.01 |
| 200: | | | | | | | |
| Vona | 35 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| | | | | | | Filtering capacity | 0.01 |
| Karval | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 1.00 | Droughty | 1.00 | Too steep for surface application | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 | Droughty | 1.00 |
| | | Leaching | 0.45 | Too acid | 0.42 | Too steep for sprinkler application | 1.00 |
| | | Too acid | 0.11 | | | Too acid | 0.42 |
| Midway, moist | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Droughty | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Too steep for surface application | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 | Depth to bedrock | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Too steep for sprinkler application | 1.00 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 201: | | | | | | | |
| Vona | 55 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| | | | | | | Filtering capacity | 0.01 |
| Midway, moist | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Droughty | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Too steep for surface application | 1.00 |
| | | Runoff | 0.40 | | | Sodium content | 0.50 |
| 202: | | | | | | | |
| Vona | 60 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 0.96 | Slope | 0.96 | Too steep for surface application | 1.00 |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Too steep for sprinkler application | 0.97 |
| | | | | | | Filtering capacity | 0.01 |
| Seldom | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | Slope | 0.96 | Slope | 0.96 | Too steep for sprinkler application | 0.97 |
| | | Runoff | 0.40 | Filtering capacity | 0.01 | Restricted permeability | 0.96 |
| | | Filtering capacity | 0.01 | | | Filtering capacity | 0.01 |
| 203: | | | | | | | |
| Vonid | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | | | | | Too steep for surface application | 0.31 |
| 204: | | | | | | | |
| Vonid | 85 | Somewhat limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Filtering capacity | 0.01 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 205: | | | | | | | |
| Vonid | 85 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 0.04 | Slope | 0.04 | Too steep for surface application | 1.00 |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Too steep for sprinkler application | 0.22 |
| | | | | | | Filtering capacity | 0.01 |
| 206: | | | | | | | |
| Vonid | 35 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| | | | | | | Filtering capacity | 0.01 |
| Karval | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 1.00 | Droughty | 1.00 | Too steep for surface application | 1.00 |
| | | Slope | 1.00 | Sloope | 1.00 | | |
| | | Leaching | 0.45 | Too acid | 0.42 | Droughty | 1.00 |
| | | Too acid | 0.11 | | | Too steep for sprinkler application | 1.00 |
| | | | | | | Too acid | 0.42 |
| Midway | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Droughty | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Too steep for surface application | 1.00 |
| | | Slope | 1.00 | Slope | 1.00 | | |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Depth to bedrock | 1.00 |
| | | | | | | Too steep for sprinkler application | 1.00 |
| 207: | | | | | | | |
| Vonid | 55 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| | | | | | | Filtering capacity | 0.01 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 207: | | | | | | | |
| Midway | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Droughty | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Sodium content | 0.50 | Sodium content | 0.50 | Too steep for surface application | 1.00 |
| | | Runoff | 0.40 | | | | |
| | | | | | | Sodium content | 0.50 |
| 208: | | | | | | | |
| Vonid | 65 | Somewhat limited: | | Somewhat limited: | | Very limited: | |
| | | Slope | 0.96 | Slope | 0.96 | Too steep for surface application | 1.00 |
| | | Filtering capacity | 0.01 | Filtering capacity | 0.01 | | |
| | | | | | | Too steep for sprinkler application | 0.97 |
| | | | | | | Filtering capacity | 0.01 |
| Seldom | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | Slope | 0.96 | Slope | 0.96 | | |
| | | Runoff | 0.40 | Filtering capacity | 0.01 | Too steep for sprinkler application | 0.97 |
| | | Filtering capacity | 0.01 | | | | |
| | | | | | | Restricted permeability | 0.96 |
| | | | | | | Filtering capacity | 0.01 |
| 209: | | | | | | | |
| Wages | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| | | | | | | Too steep for surface application | 0.08 |
| 210: | | | | | | | |
| Wages | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | Slope | 0.04 | Slope | 0.04 | | |
| | | | | | | Restricted permeability | 0.96 |
| | | | | | | Too steep for sprinkler application | 0.22 |
| 211: | | | | | | | |
| Wages, dry | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |

Table 14a.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Application of manure and food-processing waste | | Application of sewage sludge | | Disposal of wastewater by irrigation | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 212: | | | | | | | |
| Wages | 60 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | Slope | 0.37 | Slope | 0.37 | Restricted permeability | 0.96 |
| | | | | | | Too steep for sprinkler application | 0.59 |
| Karval | 25 | Very limited: | | Very limited: | | Very limited: | |
| | | Filtering capacity | 1.00 | Filtering capacity | 1.00 | Filtering capacity | 1.00 |
| | | Droughty | 1.00 | Droughty | 1.00 | Droughty | 1.00 |
| | | Leaching | 0.45 | Too acid | 0.42 | Too steep for surface application | 1.00 |
| | | Slope | 0.37 | Slope | 0.37 | Too steep for sprinkler application | 0.59 |
| | | Too acid | 0.11 | | | Too acid | 0.42 |
| 213: | | | | | | | |
| Weld | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 214: | | | | | | | |
| Weld, dry | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 215: | | | | | | | |
| Wiley | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Restricted permeability | 0.96 |
| 216: | | | | | | | |
| Wiley | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Restricted permeability | 1.00 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | | | | | Restricted permeability | 0.96 |
| | | | | | | Too steep for sprinkler application | 0.10 |
| 217: | | | | | | | |
| Wilid | 85 | Not limited | | Not limited | | Not limited | |
| 218: | | | | | | | |
| Water | 90 | Not rated | | Not rated | | Not rated | |
| 219: | | | | | | | |
| Gravel pits | 100 | Not rated | | Not rated | | Not rated | |
| 220: | | | | | | | |
| Access denied | 100 | Not rated | | Not rated | | Not rated | |

Table 14b.--Agricultural Waste Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 101: Apishapa, rarely ponded | 90 | Very limited: Depth to saturated zone; Seepage | 1.00; 0.22 | Very limited: Restricted permeability; Depth to saturated zone | 1.00; 1.00 | Very limited: Depth to saturated zone; Restricted permeability | 1.00; 1.00 |
| 102: Arvada | 85 | Very limited: Sodium content; Seepage | 1.00; 1.00 | Very limited: Restricted permeability | 1.00 | Very limited: Sodium content; Restricted permeability | 1.00; 1.00 |
| 103: Ascalon | 85 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Filtering capacity | 0.01 |
| 104: Ascalon | 85 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Too steep for surface application; Filtering capacity | 0.08; 0.01 |
| 105: Ascalon | 85 | Very limited: Seepage; Too steep for surface application | 1.00; 0.05 | Very limited: Restricted permeability; Slope | 1.00; 0.86 | Somewhat limited: Too steep for surface application; Too steep for sprinkler application; Filtering capacity | 0.91; 0.05; 0.01 |
| 106: Ascalon, dry | 85 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Filtering capacity | 0.01 |
| 107: Ascalon, dry | 85 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Too steep for surface application; Filtering capacity | 0.08; 0.01 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 108: | | | | | | | |
| Ascalon, dry | 85 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Too steep for surface application | 0.91 |
| | | Too steep for surface application | 0.05 | Slope | 0.86 | Too steep for sprinkler application | 0.05 |
| | | | | | | Filtering capacity | 0.01 |
| 109: | | | | | | | |
| Ascalon | 55 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Filtering capacity | 0.01 |
| Haxtun | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Filtering capacity | 1.00 |
| | | | | | | Restricted permeability | 0.84 |
| 110: | | | | | | | |
| Ascalon, dry | 55 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Filtering capacity | 0.01 |
| Haxtun, dry | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Filtering capacity | 1.00 |
| | | | | | | Restricted permeability | 0.84 |
| 111: | | | | | | | |
| Bacid | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| 112: | | | | | | | |
| Bankard, occasionally flooded | 55 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Flooding | 1.00 | Flooding | 0.60 | Filtering capacity | 1.00 |
| | | Seepage | 1.00 | | | Flooding | 0.60 |
| Glenberg, occasionally flooded | 30 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Flooding | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 1.00 |
| | | Seepage | 1.00 | Flooding | 0.60 | Flooding | 0.60 |
| 113: | | | | | | | |
| Bijou | 90 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 1.00 |
| 114: | | | | | | | |
| Bijou, moist | 90 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 1.00 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 115: | | | | | | | |
| Bijou, moist | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 0.21 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 0.21 |
| 116: | | | | | | | |
| Blakeland | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 0.21 | | | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 0.21 |
| 117: | | | | | | | |
| Bresser | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Filtering capacity | 1.00 |
| 118: | | | | | | | |
| Campo | 85 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |
| 119: | | | | | | | |
| Canyon | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Depth to bedrock | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 1.00 | Slope | 1.00 | Too steep for sprinkler application | 1.00 |
| | | | | | | Restricted permeability | 0.84 |
| | | | | | | Filtering capacity | 0.01 |
| Rock outcrop | 35 | Not rated | | Not rated | | Not rated | |
| 120: | | | | | | | |
| Colby | 85 | Very limited: | | Very limited: | | Not limited | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | | |
| 121: | | | | | | | |
| Colby | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 0.21 | Slope | 1.00 | Too steep for sprinkler application | 0.21 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 122: | | | | | | | |
| Colby | 50 | Very limited:<br>Seepage | 1.00 | Very limited:<br>Restricted permeability | 1.00 | Not limited | |
| Weld | 40 | Somewhat limited:<br>Seepage | 0.77 | Very limited:<br>Restricted permeability | 1.00 | Somewhat limited:<br>Restricted permeability | 0.84 |
| 123: | | | | | | | |
| Firstview | 85 | Very limited:<br>Seepage<br>Sodium content | 1.00<br>1.00 | Very limited:<br>Restricted permeability | 1.00 | Very limited:<br>Sodium content<br>Restricted permeability<br>Filtering capacity | 1.00<br>1.00<br>0.01 |
| 124: | | | | | | | |
| Fort Collins | 90 | Very limited:<br>Seepage | 1.00 | Very limited:<br>Restricted permeability | 1.00 | Somewhat limited:<br>Restricted permeability | 0.84 |
| 125: | | | | | | | |
| Fort Collins | 85 | Very limited:<br>Seepage | 1.00 | Very limited:<br>Restricted permeability | 1.00 | Somewhat limited:<br>Restricted permeability<br>Too steep for surface application | 0.84<br>0.08 |
| 126: | | | | | | | |
| Fort Collins | 55 | Very limited:<br>Seepage<br>Too steep for surface application | 1.00<br>0.21 | Very limited:<br>Restricted permeability<br>Slope | 1.00<br>1.00 | Very limited:<br>Too steep for surface application<br>Restricted permeability<br>Too steep for sprinkler application | 1.00<br>0.84<br>0.21 |
| Karval | 35 | Very limited:<br>Seepage<br>Too steep for surface application<br>Too acid | 1.00<br>1.00<br>0.42 | Very limited:<br>Slope | 1.00 | Very limited:<br>Filtering capacity<br>Too steep for surface application<br>Too steep for sprinkler application<br>Too acid | 1.00<br>1.00<br>1.00<br>0.42 |
| 127: | | | | | | | |
| Fort Collins | 50 | Very limited:<br>Seepage | 1.00 | Very limited:<br>Restricted permeability | 1.00 | Somewhat limited:<br>Restricted permeability | 0.84 |
| Platner | 35 | Somewhat limited:<br>Seepage | 0.77 | Very limited:<br>Restricted permeability | 1.00 | Somewhat limited:<br>Restricted permeability | 0.84 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 128: | | | | | | | |
| Fort Collins | 50 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 0.21 | Slope | 1.00 | Restricted permeability | 0.84 |
| | | | | | | Too steep for sprinkler application | 0.21 |
| Razor, moist | 40 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Too steep for surface application | 0.76 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Sodium content | 0.08 | | | Too steep for sprinkler application | 0.76 |
| | | | | | | Sodium content | 0.08 |
| 129: | | | | | | | |
| Fort | 85 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |
| | | Sodium content | 0.50 | | | Sodium content | 0.50 |
| | | | | | | Filtering capacity | 0.01 |
| 130: | | | | | | | |
| Fort | 85 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |
| | | Sodium content | 0.50 | | | Sodium content | 0.50 |
| | | | | | | Too steep for surface application | 0.08 |
| | | | | | | Filtering capacity | 0.01 |
| 131: | | | | | | | |
| Fort | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Too steep for surface application | 1.00 |
| | | Sodium content | 0.50 | Slope | 1.00 | Restricted permeability | 0.84 |
| | | Too steep for surface application | 0.21 | | | Sodium content | 0.50 |
| | | | | | | Too steep for sprinkler application | 0.21 |
| | | | | | | Filtering capacity | 0.01 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 131: | | | | | | | |
| Karval | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 1.00 | | | Too steep for surface application | 1.00 |
| | | Too acid | 0.42 | | | Too steep for sprinkler application | 1.00 |
| | | | | | | Too acid | 0.42 |
| 132: | | | | | | | |
| Fort | 50 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Too steep for surface application | 1.00 |
| | | Sodium content | 0.50 | | | Restricted permeability | 0.84 |
| | | Too steep for surface application | 0.21 | Slope | 1.00 | Sodium content | 0.50 |
| | | | | | | Too steep for sprinkler application | 0.21 |
| | | | | | | Filtering capacity | 0.01 |
| Razor | 40 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Too steep for surface application | 0.76 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Sodium content | 0.08 | | | Too steep for sprinkler application | 0.76 |
| | | | | | | Sodium content | 0.08 |
| 133: | | | | | | | |
| Haversid, rarely flooded | 85 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 0.77 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |
| | | Flooding | 0.40 | | | Sodium content | 0.08 |
| | | Sodium content | 0.08 | | | | |
| 134: | | | | | | | |
| Haverson, rarely flooded | 85 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |
| | | Flooding | 0.40 | | | | |
| 135: | | | | | | | |
| Haxtun | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Filtering capacity | 1.00 |
| | | | | | | Restricted permeability | 0.84 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 136: | | | | | | | |
| Haxtun, dry | 85 | Very limited:<br>Seepage | 1.00 | Very limited:<br>Restricted permeability | 1.00 | Very limited:<br>Filtering capacity<br>Restricted permeability | 1.00<br><br>0.84 |
| 137: | | | | | | | |
| Haxtun, dry | 55 | Very limited:<br>Seepage | 1.00 | Very limited:<br>Restricted permeability | 1.00 | Very limited:<br>Filtering capacity<br>Restricted permeability | 1.00<br><br>0.84 |
| Olney | 30 | Very limited:<br>Seepage | 1.00 | Very limited:<br>Restricted permeability | 1.00 | Very limited:<br>Filtering capacity<br>Restricted permeability | 1.00<br><br>0.84 |
| 138: | | | | | | | |
| Haxtun | 55 | Very limited:<br>Seepage | 1.00 | Very limited:<br>Restricted permeability | 1.00 | Very limited:<br>Filtering capacity<br>Restricted permeability | 1.00<br><br>0.84 |
| Olnest | 30 | Very limited:<br>Seepage | 1.00 | Very limited:<br>Restricted permeability | 1.00 | Very limited:<br>Filtering capacity | 1.00 |
| 139: | | | | | | | |
| Keith | 85 | Very limited:<br>Seepage | 1.00 | Very limited:<br>Restricted permeability | 1.00 | Somewhat limited:<br>Restricted permeability | 0.84 |
| 140: | | | | | | | |
| Keith | 85 | Very limited:<br>Seepage<br>Too steep for surface application | 1.00<br>0.05 | Very limited:<br>Restricted permeability<br>Slope | 1.00<br>0.86 | Somewhat limited:<br>Too steep for surface application<br>Restricted permeability<br>Too steep for sprinkler application | 0.91<br><br>0.84<br><br>0.05 |
| 141: | | | | | | | |
| Kim | 90 | Very limited:<br>Seepage | 1.00 | Very limited:<br>Restricted permeability | 1.00 | Somewhat limited:<br>Restricted permeability | 0.84 |
| 142: | | | | | | | |
| Kim | 90 | Very limited:<br>Seepage<br>Too steep for surface application | 1.00<br>0.21 | Very limited:<br>Restricted permeability<br>Slope | 1.00<br>1.00 | Very limited:<br>Too steep for surface application<br>Restricted permeability<br>Too steep for sprinkler application | 1.00<br><br>0.84<br><br>0.21 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 143: | | | | | | | |
| Kimst | 90 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |
| 144: | | | | | | | |
| Kimst | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 0.21 | Slope | 1.00 | Restricted permeability | 0.84 |
| | | | | | | Too steep for sprinkler application | 0.21 |
| 145: | | | | | | | |
| Las Animas, occasionally flooded | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Flooding | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Flooding | 0.60 |
| | | Depth to saturated zone | 1.00 | Flooding | 0.60 | Filtering capacity | 0.01 |
| 146: | | | | | | | |
| Limon, rarely flooded | 85 | Somewhat limited: | | Very limited: | | Very limited: | |
| | | Flooding | 0.40 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Sodium content | 0.08 | | | Salinity | 0.13 |
| | | | | | | Sodium content | 0.08 |
| 147: | | | | | | | |
| Limon, moist, rarely flooded | 85 | Somewhat limited: | | Very limited: | | Very limited: | |
| | | Flooding | 0.40 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Sodium content | 0.08 | | | Salinity | 0.13 |
| | | | | | | Sodium content | 0.08 |
| 148: | | | | | | | |
| Manzanola | 85 | Somewhat limited: | | Very limited: | | Very limited: | |
| | | Seepage | 0.77 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| 149: | | | | | | | |
| Manzanst, rarely flooded | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Flooding | 0.40 | | | Sodium content | 0.18 |
| | | Sodium content | 0.18 | | | | |
| 150: | | | | | | | |
| Manzanst | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Sodium content | 0.18 | | | Sodium content | 0.18 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 151: | | | | | | | |
| Midway | 85 | Very limited:<br>Depth to bedrock<br>Sodium content | 1.00<br>0.50 | Very limited:<br>Restricted permeability<br>Depth to bedrock | 1.00<br>1.00 | Very limited:<br>Depth to bedrock<br>Restricted permeability<br>Sodium content | 1.00<br>1.00<br>0.50 |
| 152: | | | | | | | |
| Midway, moist | 85 | Very limited:<br>Depth to bedrock<br>Sodium content | 1.00<br>0.50 | Very limited:<br>Restricted permeability<br>Depth to bedrock | 1.00<br>1.00 | Very limited:<br>Depth to bedrock<br>Restricted permeability<br>Sodium content | 1.00<br>1.00<br>0.50 |
| 153: | | | | | | | |
| Midway | 55 | Very limited:<br>Depth to bedrock<br>Too steep for surface application<br>Sodium content | 1.00<br>0.76<br>0.50 | Very limited:<br>Restricted permeability<br>Depth to bedrock<br>Slope | 1.00<br>1.00<br>1.00 | Very limited:<br>Depth to bedrock<br>Too steep for surface application<br>Restricted permeability<br>Too steep for sprinkler application<br>Sodium content | 1.00<br>1.00<br>1.00<br>0.76<br>0.50 |
| Razor | 30 | Very limited:<br>Seepage<br>Depth to bedrock<br>Too steep for surface application<br>Sodium content | 1.00<br>1.00<br>0.76<br>0.08 | Very limited:<br>Restricted permeability<br>Depth to bedrock<br>Slope | 1.00<br>1.00<br>1.00 | Very limited:<br>Restricted permeability<br>Depth to bedrock<br>Too steep for surface application<br>Too steep for sprinkler application<br>Sodium content | 1.00<br>1.00<br>1.00<br>0.76<br>0.08 |
| 154: | | | | | | | |
| Midway, moist | 55 | Very limited:<br>Depth to bedrock<br>Too steep for surface application<br>Sodium content | 1.00<br>0.76<br>0.50 | Very limited:<br>Restricted permeability<br>Depth to bedrock<br>Slope | 1.00<br>1.00<br>1.00<br>1.00 | Very limited:<br>Depth to bedrock<br>Too steep for surface application<br>Restricted permeability<br>Too steep for sprinkler application<br>Sodium content | 1.00<br>1.00<br>1.00<br>0.76<br>0.50 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 154: | | | | | | | |
| Razor, moist | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 1.00 |
| | | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Too steep for surface application | 0.76 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Sodium content | 0.08 | | | Too steep for sprinkler application | 0.76 |
| | | | | | | Sodium content | 0.08 |
| 155: | | | | | | | |
| Midway | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Restricted permeability | 1.00 | Depth to bedrock | 1.00 |
| | | Too steep for surface application | 1.00 | Depth to bedrock | 1.00 | Too steep for surface application | 1.00 |
| | | Sodium content | 0.50 | Slope | 1.00 | Too steep for sprinkler application | 1.00 |
| | | | | | | Restricted permeability | 1.00 |
| | | | | | | Sodium content | 0.50 |
| Rock outcrop | 30 | Not rated | | Not rated | | Not rated | |
| 156: | | | | | | | |
| Midway, moist | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Restricted permeability | 1.00 | Depth to bedrock | 1.00 |
| | | Too steep for surface application | 1.00 | Depth to bedrock | 1.00 | Too steep for surface application | 1.00 |
| | | Sodium content | 0.50 | Slope | 1.00 | Too steep for sprinkler application | 1.00 |
| | | | | | | Restricted permeability | 1.00 |
| | | | | | | Sodium content | 0.50 |
| Rock outcrop, moist | 30 | Not rated | | Not rated | | Not rated | |
| 157: | | | | | | | |
| Nunn | 85 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |
| | | | | | | Too steep for surface application | 0.08 |
| 158: | | | | | | | |
| Nunn | 55 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |
| Sampson, rarely flooded | 30 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |
| | | Flooding | 0.40 | | | | |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 159: | | | | | | | |
| Nunn, dry | 50 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability | 0.84 |
| Sampson, dry, rarely flooded | 35 | Very limited: Seepage; Flooding | 1.00; 0.40 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability | 0.84 |
| 160: | | | | | | | |
| Olnest | 85 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Very limited: Filtering capacity | 1.00 |
| 161: | | | | | | | |
| Olnest | 85 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Filtering capacity | 0.01 |
| 162: | | | | | | | |
| Olnest | 85 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Too steep for surface application; Filtering capacity | 0.08; 0.01 |
| 163: | | | | | | | |
| Olnest | 90 | Very limited: Seepage; Too steep for surface application | 1.00; 0.48 | Very limited: Restricted permeability; Slope | 1.00; 1.00 | Very limited: Too steep for surface application; Too steep for sprinkler application; Filtering capacity | 1.00; 0.48; 0.01 |
| 164: | | | | | | | |
| Olney | 85 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Very limited: Filtering capacity; Restricted permeability | 1.00; 0.84 |
| 165: | | | | | | | |
| Olney | 85 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Very limited: Filtering capacity; Restricted permeability | 1.00; 0.84 |
| 166: | | | | | | | |
| Olney | 85 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Very limited: Filtering capacity; Restricted permeability; Too steep for surface application | 1.00; 0.84; 0.08 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 167: | | | | | | | |
| Olney | 90 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 0.48 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | | | | | Restricted permeability | 0.84 |
| | | | | | | Too steep for sprinkler application | 0.48 |
| 168: | | | | | | | |
| Olney | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 0.21 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | | | | | Restricted permeability | 0.84 |
| | | | | | | Too steep for sprinkler application | 0.21 |
| Midway | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Restricted permeability | 1.00 | Depth to bedrock | 1.00 |
| | | Sodium content | 0.50 | | | Restricted permeability | 1.00 |
| | | Too steep for surface application | 0.21 | Depth to bedrock | 1.00 | Too steep for surface application | 1.00 |
| | | | | Slope | 1.00 | Sodium content | 0.50 |
| | | | | | | Too steep for sprinkler application | 0.21 |
| 169: | | | | | | | |
| Otero | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 0.01 |
| 170: | | | | | | | |
| Oterodry | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 0.01 |
| 171: | | | | | | | |
| Oterodry | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Too steep for surface application | 0.91 |
| | | Too steep for surface application | 0.05 | Slope | 0.86 | Too steep for sprinkler application | 0.05 |
| | | | | | | Filtering capacity | 0.01 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 172: | | | | | | | |
| Platner | 85 | Somewhat limited: Seepage | 0.77 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability | 0.84 |
| 173: | | | | | | | |
| Platner | 50 | Somewhat limited: Seepage | 0.77 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability | 0.84 |
| Ascalon | 35 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Filtering capacity | 0.01 |
| 174: | | | | | | | |
| Pleasant, rarely ponded | 90 | Very limited: Seepage; Depth to saturated zone | 1.00; 1.00 | Very limited: Restricted permeability; Depth to saturated zone | 1.00; 1.00 | Very limited: Depth to saturated zone; Restricted permeability | 1.00; 1.00 |
| 175: | | | | | | | |
| Rago, rarely flooded | 90 | Somewhat limited: Seepage; Flooding | 0.77; 0.40 | Very limited: Restricted permeability | 1.00 | Very limited: Restricted permeability | 1.00 |
| 176: | | | | | | | |
| Rago, dry, rarely flooded | 90 | Somewhat limited: Seepage; Flooding | 0.77; 0.40 | Very limited: Restricted permeability | 1.00 | Very limited: Restricted permeability | 1.00 |
| 177: | | | | | | | |
| Razor | 85 | Very limited: Seepage; Depth to bedrock; Sodium content | 1.00; 1.00; 1.00 | Very limited: Restricted permeability; Depth to bedrock | 1.00; 1.00 | Very limited: Restricted permeability; Depth to bedrock; Sodium content | 1.00; 1.00; 1.00 |
| 178: | | | | | | | |
| Razor, moist | 85 | Very limited: Seepage; Depth to bedrock; Sodium content | 1.00; 1.00; 1.00 | Very limited: Restricted permeability; Depth to bedrock | 1.00; 1.00 | Very limited: Restricted permeability; Depth to bedrock; Sodium content | 1.00; 1.00; 1.00 |
| 179: | | | | | | | |
| Sampson, rarely flooded | 90 | Very limited: Seepage; Flooding | 1.00; 0.40 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability | 0.84 |
| 180: | | | | | | | |
| Sampson, dry, rarely flooded | 90 | Very limited: Seepage; Flooding | 1.00; 0.40 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability | 0.84 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 181: | | | | | | | |
| Satanta | 90 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability; Filtering capacity | 0.84; 0.01 |
| 182: | | | | | | | |
| Satanta, dry | 90 | Very limited: Seepage | 1.00 | Very limited: Restricted permeability | 1.00 | Somewhat limited: Restricted permeability; Filtering capacity | 0.84; 0.01 |
| 183: | | | | | | | |
| Seldom, rarely flooded | 85 | Very limited: Seepage; Depth to saturated zone; Flooding | 1.00; 1.00; 0.40 | Very limited: Restricted permeability; Depth to saturated zone | 1.00; 1.00 | Very limited: Depth to saturated zone; Restricted permeability; Filtering capacity | 1.00; 0.84; 0.01 |
| 184: | | | | | | | |
| Shingle | 55 | Very limited: Depth to bedrock; Seepage | 1.00; 0.77 | Very limited: Restricted permeability; Depth to bedrock; Slope | 1.00; 1.00; 0.12 | Very limited: Depth to bedrock; Restricted permeability; Too steep for surface application | 1.00; 0.84; 0.31 |
| Midway | 30 | Very limited: Depth to bedrock; Sodium content | 1.00; 0.50 | Very limited: Restricted permeability; Depth to bedrock; Slope | 1.00; 1.00; 0.12 | Very limited: Depth to bedrock; Restricted permeability; Sodium content; Too steep for surface application | 1.00; 1.00; 0.50; 0.31 |
| 185: | | | | | | | |
| Shingle, moist | 55 | Very limited: Depth to bedrock; Seepage | 1.00; 0.77 | Very limited: Restricted permeability; Depth to bedrock; Slope | 1.00; 1.00; 0.12 | Very limited: Depth to bedrock; Restricted permeability; Too steep for surface application | 1.00; 0.84; 0.31 |
| Midway, moist | 30 | Very limited: Depth to bedrock; Sodium content | 1.00; 0.50 | Very limited: Restricted permeability; Depth to bedrock; Slope | 1.00; 1.00; 0.12 | Very limited: Depth to bedrock; Restricted permeability; Sodium content; Too steep for surface application | 1.00; 1.00; 0.50; 0.31 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 186: | | | | | | | |
| Sundance | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Filtering capacity | 1.00 |
| | | | | | | Restricted permeability | 0.84 |
| 187: | | | | | | | |
| Table Mountain, rarely flooded | 85 | Very limited: | | Very limited: | | Not limited | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | | |
| | | Flooding | 0.40 | | | | |
| 188: | | | | | | | |
| Travessilla | 60 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 |
| | | Depth to bedrock | 1.00 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 1.00 | Restricted permeability | 0.96 | | |
| | | | | | | Too steep for sprinkler application | 1.00 |
| | | | | | | Filtering capacity | 0.01 |
| Rock outcrop | 25 | Not rated | | Not rated | | Not rated | |
| 189: | | | | | | | |
| Truckton | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 1.00 |
| 190: | | | | | | | |
| Truckton | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 0.05 | Slope | 0.86 | Too steep for surface application | 0.91 |
| | | | | | | Too steep for sprinkler application | 0.05 |
| 191: | | | | | | | |
| Truckton, dry | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 1.00 |
| 192: | | | | | | | |
| Truckton, dry | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 0.05 | Slope | 0.86 | Too steep for surface application | 0.91 |
| | | | | | | Too steep for sprinkler application | 0.05 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 193: | | | | | | | |
| Valent | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 1.00 | | | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 1.00 |
| 194: | | | | | | | |
| Valent | 55 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 0.86 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 0.05 | | | Too steep for surface application | 0.91 |
| | | | | | | Too steep for sprinkler application | 0.05 |
| Bijou | 30 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 0.05 | Slope | 0.86 | Too steep for surface application | 0.91 |
| | | | | | | Too steep for sprinkler application | 0.05 |
| 195: | | | | | | | |
| Valent | 60 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 1.00 | | | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 1.00 |
| Vona | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 0.48 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 0.48 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 196: | | | | | | | |
| Valent | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 1.00 | | | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 1.00 |
| Vonid | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 0.48 | Restricted permeability | 0.96 | Too steep for surface application | 1.00 |
| | | | | | | Too steep for sprinkler application | 0.48 |
| 197: | | | | | | | |
| Vona | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 1.00 |
| | | | | Slope | 0.12 | Too steep for surface application | 0.31 |
| 198: | | | | | | | |
| Vona | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 0.01 |
| 199: | | | | | | | |
| Vona | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 0.48 | Restricted permeability | 0.96 | Too steep for sprinkler application | 0.48 |
| | | | | | | Filtering capacity | 0.01 |
| 200: | | | | | | | |
| Vona | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 0.21 | Restricted permeability | 0.96 | Too steep for sprinkler application | 0.21 |
| | | | | | | Filtering capacity | 0.01 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 200: | | | | | | | |
| Karval | 30 | Very limited:<br>Seepage<br>Too steep for surface application<br>Too acid | <br>1.00<br>1.00<br>0.42 | Very limited:<br>Slope | <br>1.00 | Very limited:<br>Filtering capacity<br>Too steep for surface application<br>Too steep for sprinkler application<br>Too acid | <br>1.00<br>1.00<br>1.00<br>0.42 |
| Midway, moist | 20 | Very limited:<br>Depth to bedrock<br>Too steep for surface application<br>Sodium content | <br>1.00<br>1.00<br>0.50 | Very limited:<br>Slope<br>Restricted permeability<br>Depth to bedrock | <br>1.00<br>1.00<br>1.00 | Very limited:<br>Depth to bedrock<br>Too steep for surface application<br>Too steep for sprinkler application<br>Restricted permeability<br>Sodium content | <br>1.00<br>1.00<br>1.00<br>1.00<br>0.50 |
| 201: | | | | | | | |
| Vona | 55 | Very limited:<br>Seepage<br>Too steep for surface application | <br>1.00<br>0.21 | Very limited:<br>Slope<br>Restricted permeability | <br>1.00<br>0.96 | Very limited:<br>Too steep for surface application<br>Too steep for sprinkler application<br>Filtering capacity | <br>1.00<br>0.21<br>0.01 |
| Midway, moist | 30 | Very limited:<br>Depth to bedrock<br>Sodium content<br>Too steep for surface application | <br>1.00<br>0.50<br>0.21 | Very limited:<br>Restricted permeability<br>Depth to bedrock<br>Slope | <br>1.00<br>1.00<br>1.00 | Very limited:<br>Depth to bedrock<br>Restricted permeability<br>Too steep for sirface application<br>Sodium content<br>Too steep for sprinkler application | <br>1.00<br>1.00<br>1.00<br>0.50<br>0.21 |
| 202: | | | | | | | |
| Vona | 60 | Very limited:<br>Seepage<br>Too steep for surface application | <br>1.00<br>1.00 | Very limited:<br>Slope<br>Restricted permeability | <br>1.00<br>0.96 | Very limited:<br>Too steep for surface application<br>Too steep for sprinkler application<br>Filtering capacity | <br>1.00<br>1.00<br>0.01 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 202: | | | | | | | |
| Seldom | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Depth to saturated zone | 1.00 |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 1.00 | Slope | 1.00 | Too steep for sprinkler application | 1.00 |
| | | | | | | Restricted permeability | 0.84 |
| | | | | | | Filtering capacity | 0.01 |
| 203: | | | | | | | |
| Vonid | 85 | Very limited: | | Somewhat limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 1.00 |
| | | | | Slope | 0.12 | Too steep for surface application | 0.31 |
| 204: | | | | | | | |
| Vonid | 85 | Very limited: | | Somewhat limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 0.96 | Filtering capacity | 0.01 |
| 205: | | | | | | | |
| Vonid | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 0.48 | Restricted permeability | 0.96 | Too steep for sprinkler application | 0.48 |
| | | | | | | Filtering capacity | 0.01 |
| 206: | | | | | | | |
| Vonid | 35 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 0.21 | Restricted permeability | 0.96 | Too steep for sprinkler application | 0.21 |
| | | | | | | Filtering capacity | 0.01 |
| Karval | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 1.00 | | | Too steep for surface application | 1.00 |
| | | Too acid | 0.42 | | | Too steep for sprinkler application | 1.00 |
| | | | | | | Too acid | 0.42 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 206: | | | | | | | |
| Midway | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Slope | 1.00 | Depth to bedrock | 1.00 |
| | | Too steep for surface application | 1.00 | Restricted permeability | 1.00 | Too steep for surface application | 1.00 |
| | | Sodium content | 0.50 | Depth to bedrock | 1.00 | Too steep for sprinkler application | 1.00 |
| | | | | | | Restricted permeability | 1.00 |
| | | | | | | Sodium content | 0.50 |
| 207: | | | | | | | |
| Vonid | 55 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 0.21 | Restricted permeability | 0.96 | Too steep for sprinkler application | 0.21 |
| | | | | | | Filtering capacity | 0.01 |
| Midway | 30 | Very limited: | | Very limited: | | Very limited: | |
| | | Depth to bedrock | 1.00 | Restricted permeability | 1.00 | Depth to bedrock | 1.00 |
| | | Sodium content | 0.50 | Depth to bedrock | 1.00 | Restricted permeability | 1.00 |
| | | Too steep for surface application | 0.21 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | | | | | Sodium content | 0.50 |
| | | | | | | Too steep for sprinkler application | 0.21 |
| 208: | | | | | | | |
| Vonid | 65 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 1.00 | Restricted permeability | 0.96 | Too steep for sprinkler application | 1.00 |
| | | | | | | Filtering capacity | 0.01 |
| Seldom | 20 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Depth to saturated zone | 1.00 |
| | | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 1.00 | Slope | 1.00 | Too steep for sprinkler application | 1.00 |
| | | | | | | Restricted permeability | 0.84 |
| | | | | | | Filtering capacity | 0.01 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 209: | | | | | | | |
| Wages | 85 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |
| | | | | | | Too steep for surface application | 0.08 |
| 210: | | | | | | | |
| Wages | 85 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 0.48 | Slope | 1.00 | Restricted permeability | 0.84 |
| | | | | | | Too steep for sprinkler application | 0.48 |
| 211: | | | | | | | |
| Wages, dry | 85 | Very limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |
| 212: | | | | | | | |
| Wages | 60 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Restricted permeability | 1.00 | Too steep for surface application | 1.00 |
| | | Too steep for surface application | 0.93 | Slope | 1.00 | Too steep for sprinkler application | 0.93 |
| | | | | | | Restricted permeability | 0.84 |
| Karval | 25 | Very limited: | | Very limited: | | Very limited: | |
| | | Seepage | 1.00 | Slope | 1.00 | Filtering capacity | 1.00 |
| | | Too steep for surface application | 0.93 | | | Too steep for surface application | 1.00 |
| | | Too acid | 0.42 | | | Too steep for sprinkler application | 0.93 |
| | | | | | | Too acid | 0.42 |
| 213: | | | | | | | |
| Weld | 85 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 0.77 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |
| 214: | | | | | | | |
| Weld, dry | 85 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 0.77 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |
| 215: | | | | | | | |
| Wiley | 85 | Somewhat limited: | | Very limited: | | Somewhat limited: | |
| | | Seepage | 0.77 | Restricted permeability | 1.00 | Restricted permeability | 0.84 |

Table 14b.--Agricultural Waste Management--Continued

| Map symbol and soil name | Pct. of map unit | Overland flow of wastewater | | Rapid infiltration of wastewater | | Slow rate treatment of wastewater | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 216: | | | | | | | |
| Wiley | 85 | Somewhat limited:<br>Seepage<br>Too steep for surface application | <br>0.77<br>0.21 | Very limited:<br>Restricted permeability<br>Slope | <br>1.00<br>1.00 | Very limited:<br>Too steep for surface application<br>Restricted permeability<br>Too steep for sprinkler application | <br>1.00<br><br>0.84<br>0.21 |
| 217: | | | | | | | |
| Wilid | 85 | Very limited:<br>Seepage | <br>1.00 | Very limited:<br>Restricted permeability | <br>1.00 | Not limited | |
| 218: | | | | | | | |
| Water | 90 | Not rated | | Not rated | | Not rated | |
| 219: | | | | | | | |
| Gravel pits | 100 | Not rated | | Not rated | | Not rated | |
| 220: | | | | | | | |
| Access denied | 100 | Not rated | | Not rated | | Not rated | |

Table 15a.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

| Map symbol and soil name | Pct. of map unit | Potential source of gravel | | Potential source of sand | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 101: Apishapa, rarely ponded | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 102: Arvada | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 103: Ascalon | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.01 |
| 104: Ascalon | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.01 |
| 105: Ascalon | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.01 |
| 106: Ascalon, dry | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.01 |
| 107: Ascalon, dry | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.01 |
| 108: Ascalon, dry | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.01 |
| 109: Ascalon | 55 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.01 |
| Haxtun | 30 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 110: Ascalon, dry | 55 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.01 |

Table 15a.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of gravel | | Potential source of sand | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 110: | | | | | |
| Haxtun, dry | 30 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 111: | | | | | |
| Bacid | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 112: | | | | | |
| Bankard, occasionally flooded | 55 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.12 |
| | | Thickest layer | 0.00 | Thickest layer | 0.16 |
| Glenberg, occasionally flooded | 30 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.03 |
| | | Thickest layer | 0.00 | Bottom layer | 0.12 |
| 113: | | | | | |
| Bijou | 90 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.33 |
| 114: | | | | | |
| Bijou, moist | 90 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.33 |
| 115: | | | | | |
| Bijou, moist | 90 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.33 |
| 116: | | | | | |
| Blakeland | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.12 |
| | | Thickest layer | 0.00 | Bottom layer | 0.33 |
| 117: | | | | | |
| Bresser | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.00 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| 118: | | | | | |
| Campo | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 119: | | | | | |
| Canyon | 55 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Rock outcrop | 35 | Not rated | | Not rated | |

Table 15a.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of gravel | | Potential source of sand | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 120: | | | | | |
| Colby | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 121: | | | | | |
| Colby | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 122: | | | | | |
| Colby | 50 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Weld | 40 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 123: | | | | | |
| Firstview | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 124: | | | | | |
| Fort Collins | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 125: | | | | | |
| Fort Collins | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 126: | | | | | |
| Fort Collins | 55 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Karval | 35 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.09 |
| | | Thickest layer | 0.00 | Bottom layer | 0.33 |
| 127: | | | | | |
| Fort Collins | 50 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Platner | 35 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 128: | | | | | |
| Fort Collins | 50 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Razor, moist | 40 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |

Table 15a.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of gravel | | Potential source of sand | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 129: | | | | | |
| Fort | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 130: | | | | | |
| Fort | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 131: | | | | | |
| Fort | 55 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Karval | 35 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.09 |
| | | Thickest layer | 0.00 | Bottom layer | 0.33 |
| 132: | | | | | |
| Fort | 50 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Razor | 40 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 133: | | | | | |
| Haversid, rarely flooded | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 134: | | | | | |
| Haverson, rarely flooded | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 135: | | | | | |
| Haxtun | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 136: | | | | | |
| Haxtun, dry | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 137: | | | | | |
| Haxtun, dry | 55 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Olney | 30 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.03 |
| | | Thickest layer | 0.00 | Bottom layer | 0.04 |

Table 15a.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of gravel | | Potential source of sand | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 138: | | | | | |
| Haxtun | 55 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Olnest | 30 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.04 |
| | | Thickest layer | 0.00 | Thickest layer | 0.04 |
| 139: | | | | | |
| Keith | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 140: | | | | | |
| Keith | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 141: | | | | | |
| Kim | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 142: | | | | | |
| Kim | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 143: | | | | | |
| Kimst | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 144: | | | | | |
| Kimst | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 145: | | | | | |
| Las Animas, occasionally flooded | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.08 |
| 146: | | | | | |
| Limon, rarely flooded | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 147: | | | | | |
| Limon, moist, rarely flooded | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |

Table 15a.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of gravel | | Potential source of sand | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 148: | | | | | |
| Manzanola | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 149: | | | | | |
| Manzanst, rarely flooded | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 150: | | | | | |
| Manzanst | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 151: | | | | | |
| Midway | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 152: | | | | | |
| Midway, moist | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 153: | | | | | |
| Midway | 55 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Razor | 30 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 154: | | | | | |
| Midway, moist | 55 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Razor, moist | 30 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 155: | | | | | |
| Midway | 55 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Rock outcrop | 30 | Not rated | | Not rated | |
| 156: | | | | | |
| Midway, moist | 55 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Rock outcrop, moist | 30 | Not rated | | Not rated | |

Table 15a.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of gravel | | Potential source of sand | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 157: | | | | | |
| Nunn | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 158: | | | | | |
| Nunn | 55 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Sampson, rarely flooded | 30 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 159: | | | | | |
| Nunn, dry | 50 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Sampson, dry, rarely flooded | 35 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 160: | | | | | |
| Olnest | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.04 |
| | | Thickest layer | 0.00 | Thickest layer | 0.04 |
| 161: | | | | | |
| Olnest | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.04 |
| | | Thickest layer | 0.00 | Thickest layer | 0.04 |
| 162: | | | | | |
| Olnest | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.04 |
| | | Thickest layer | 0.00 | Thickest layer | 0.04 |
| 163: | | | | | |
| Olnest | 90 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.04 |
| | | Thickest layer | 0.00 | Thickest layer | 0.04 |
| 164: | | | | | |
| Olney | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.03 |
| | | Thickest layer | 0.00 | Bottom layer | 0.04 |
| 165: | | | | | |
| Olney | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.03 |
| | | Thickest layer | 0.00 | Bottom layer | 0.04 |
| 166: | | | | | |
| Olney | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.03 |
| | | Thickest layer | 0.00 | Bottom layer | 0.04 |

Table 15a.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of gravel | | Potential source of sand | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 167: | | | | | |
| Olney | 90 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.03 |
| | | Thickest layer | 0.00 | Bottom layer | 0.04 |
| 168: | | | | | |
| Olney | 55 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.03 |
| | | Thickest layer | 0.00 | Bottom layer | 0.04 |
| Midway | 30 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 169: | | | | | |
| Otero | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| 170: | | | | | |
| Oterodry | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.03 |
| | | Thickest layer | 0.00 | Bottom layer | 0.04 |
| 171: | | | | | |
| Oterodry | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.03 |
| | | Thickest layer | 0.00 | Bottom layer | 0.04 |
| 172: | | | | | |
| Platner | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 173: | | | | | |
| Platner | 50 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Ascalon | 35 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.01 |
| 174: | | | | | |
| Pleasant, rarely ponded | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 175: | | | | | |
| Rago, rarely flooded | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 176: | | | | | |
| Rago, dry, rarely flooded | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |

Table 15a.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of gravel | | Potential source of sand | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 177: | | | | | |
| Razor | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 178: | | | | | |
| Razor, moist | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 179: | | | | | |
| Sampson, rarely flooded | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 180: | | | | | |
| Sampson, dry, rarely flooded | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 181: | | | | | |
| Satanta | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 182: | | | | | |
| Satanta, dry | 90 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 183: | | | | | |
| Seldom, rarely flooded | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.03 |
| | | Thickest layer | 0.00 | Thickest layer | 0.08 |
| 184: | | | | | |
| Shingle | 55 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Midway | 30 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 185: | | | | | |
| Shingle, moist | 55 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Midway, moist | 30 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 186: | | | | | |
| Sundance | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |

Table 15a.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of gravel | | Potential source of sand | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 187: | | | | | |
| Table Mountain, rarely flooded | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 188: | | | | | |
| Travessilla | 60 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Rock outcrop | 25 | Not rated | | Not rated | |
| 189: | | | | | |
| Truckton | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.07 |
| | | Thickest layer | 0.00 | Bottom layer | 0.12 |
| 190: | | | | | |
| Truckton | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.07 |
| | | Thickest layer | 0.00 | Bottom layer | 0.12 |
| 191: | | | | | |
| Truckton, dry | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.07 |
| | | Thickest layer | 0.00 | Bottom layer | 0.12 |
| 192: | | | | | |
| Truckton, dry | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.07 |
| | | Thickest layer | 0.00 | Bottom layer | 0.12 |
| 193: | | | | | |
| Valent | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.33 |
| | | Thickest layer | 0.00 | Thickest layer | 0.90 |
| 194: | | | | | |
| Valent | 55 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.33 |
| | | Thickest layer | 0.00 | Thickest layer | 0.90 |
| Bijou | 30 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.33 |
| 195: | | | | | |
| Valent | 60 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.33 |
| | | Thickest layer | 0.00 | Thickest layer | 0.90 |
| Vona | 30 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| 196: | | | | | |
| Valent | 55 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.33 |
| | | Thickest layer | 0.00 | Thickest layer | 0.90 |

Table 15a.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of gravel | | Potential source of sand | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 196: | | | | | |
| Vonid | 35 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| 197: | | | | | |
| Vona | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| 198: | | | | | |
| Vona | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| 199: | | | | | |
| Vona | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| 200: | | | | | |
| Vona | 35 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| Karval | 30 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.09 |
| | | Thickest layer | 0.00 | Bottom layer | 0.33 |
| Midway, moist | 20 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 201: | | | | | |
| Vona | 55 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| Midway, moist | 30 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 202: | | | | | |
| Vona | 60 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| Seldom | 20 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.03 |
| | | Thickest layer | 0.00 | Thickest layer | 0.08 |
| 203: | | | | | |
| Vonid | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| 204: | | | | | |
| Vonid | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |

Table 15a.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of gravel | | Potential source of sand | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 205: | | | | | |
| Vonid | 85 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| 206: | | | | | |
| Vonid | 35 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| Karval | 30 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.09 |
| | | Thickest layer | 0.00 | Bottom layer | 0.33 |
| Midway | 20 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 207: | | | | | |
| Vonid | 55 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| Midway | 30 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 208: | | | | | |
| Vonid | 65 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.08 |
| | | Thickest layer | 0.00 | Bottom layer | 0.11 |
| Seldom | 20 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.03 |
| | | Thickest layer | 0.00 | Thickest layer | 0.08 |
| 209: | | | | | |
| Wages | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 210: | | | | | |
| Wages | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 211: | | | | | |
| Wages, dry | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 212: | | | | | |
| Wages | 60 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Karval | 25 | Poor: | | Fair: | |
| | | Bottom layer | 0.00 | Thickest layer | 0.09 |
| | | Thickest layer | 0.00 | Bottom layer | 0.33 |

Table 15a.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of gravel | | Potential source of sand | |
|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 213: | | | | | |
| Weld | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 214: | | | | | |
| Weld, dry | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 215: | | | | | |
| Wiley | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 216: | | | | | |
| Wiley | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 217: | | | | | |
| Wilid | 85 | Poor: | | Poor: | |
| | | Bottom layer | 0.00 | Bottom layer | 0.00 |
| | | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 218: | | | | | |
| Water | 90 | Not rated | | Not rated | |
| 219: | | | | | |
| Gravel pits | 100 | Not rated | | Not rated | |
| 220: | | | | | |
| Access denied | 100 | Not rated | | Not rated | |

**Table 15b.--Construction Materials**

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 101: | | | | | | | |
| Apishapa, rarely ponded | 90 | Poor: | | Poor: | | Poor: | |
| | | Too clayey | 0.00 | Depth to saturated zone | 0.00 | Too clayey | 0.00 |
| | | Low content of organic matter | 0.12 | | | Depth to saturated zone | 0.00 |
| | | | | Low strength | 0.00 | | |
| | | | | Shrink-swell | 0.12 | | |
| 102: | | | | | | | |
| Arvada | 85 | Poor: | | Poor: | | Poor: | |
| | | Too clayey | 0.00 | Low strength | 0.00 | Too clayey | 0.00 |
| | | Sodium content | 0.00 | Shrink-swell | 0.32 | Sodium content | 0.00 |
| | | Low content of organic matter | 0.12 | | | | |
| | | Salinity | 0.88 | | | | |
| 103: | | | | | | | |
| Ascalon | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | No water erosion | 0.99 | | | | |
| 104: | | | | | | | |
| Ascalon | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | No water erosion | 0.99 | | | | |
| 105: | | | | | | | |
| Ascalon | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | No water erosion | 0.99 | | | | |
| 106: | | | | | | | |
| Ascalon, dry | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | No water erosion | 0.99 | | | | |
| 107: | | | | | | | |
| Ascalon, dry | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | No water erosion | 0.99 | | | | |
| 108: | | | | | | | |
| Ascalon, dry | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | No water erosion | 0.99 | | | | |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 109: | | | | | | | |
| Ascalon | 55 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | No water erosion | 0.99 | | | | |
| Haxtun | 30 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| 110: | | | | | | | |
| Ascalon, dry | 55 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | No water erosion | 0.99 | | | | |
| Haxtun, dry | 30 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| 111: | | | | | | | |
| Bacid | 85 | Fair: | | Poor: | | Good | |
| | | Low content of organic matter | 0.12 | Low strength | 0.00 | | |
| | | | | Shrink-swell | 0.87 | | |
| | | Water erosion | 0.90 | | | | |
| 112: | | | | | | | |
| Bankard, occasionally flooded | 55 | Poor: | | Good | | Fair: | |
| | | Wind erosion | 0.00 | | | Too sandy | 0.78 |
| | | Droughty | 0.11 | | | | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Too sandy | 0.78 | | | | |
| Glenberg, occasionally flooded | 30 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Droughty | 1.00 | | | | |
| 113: | | | | | | | |
| Bijou | 90 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| | | Droughty | 0.97 | | | | |
| 114: | | | | | | | |
| Bijou, moist | 90 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| | | Droughty | 0.97 | | | | |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 115: | | | | | | | |
| Bijou, moist | 90 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| | | Droughty | 0.97 | | | | |
| 116: | | | | | | | |
| Blakeland | 85 | Poor: | | Good | | Fair: | |
| | | Wind erosion | 0.00 | | | Too sandy | 0.06 |
| | | Too sandy | 0.06 | | | | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Droughty | 0.35 | | | | |
| 117: | | | | | | | |
| Bresser | 85 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Too sandy | 0.94 |
| | | Droughty | 0.70 | | | | |
| | | Too sandy | 0.94 | | | | |
| 118: | | | | | | | |
| Campo | 85 | Fair: | | Fair: | | Good | |
| | | Low content of organic matter | 0.12 | Low strength | 0.22 | | |
| | | No water erosion | 0.99 | | | | |
| 119: | | | | | | | |
| Canyon | 55 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Slope | 0.00 | Slope | 0.00 |
| | | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 | Rock fragments | 0.00 |
| | | Low content of organic matter | 0.88 | | | Depth to bedrock | 0.00 |
| Rock outcrop | 35 | Not rated | | Not rated | | Not rated | |
| 120: | | | | | | | |
| Colby | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.68 | | | | |
| 121: | | | | | | | |
| Colby | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.68 | | | | |
| 122: | | | | | | | |
| Colby | 50 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.68 | | | | |
| Weld | 40 | Fair: | | Poor: | | Good | |
| | | No water erosion | 0.99 | Low strength | 0.00 | | |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 123: | | | | | | | |
| Firstview | 85 | Poor: | | Fair: | | Poor: | |
| | | Wind erosion | 0.00 | Shrink-swell | 0.96 | Sodium content | 0.00 |
| | | Sodium content | 0.00 | | | Salinity | 0.88 |
| | | Too alkaline | 0.00 | | | | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Salinity | 0.88 | | | | |
| 124: | | | | | | | |
| Fort Collins | 90 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.90 | | | | |
| 125: | | | | | | | |
| Fort Collins | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.90 | | | | |
| 126: | | | | | | | |
| Fort Collins | 55 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.90 | | | | |
| Karval | 35 | Poor: | | Fair: | | Poor: | |
| | | Droughty | 0.00 | Slope | 0.82 | Slope | 0.00 |
| | | Wind erosion | 0.00 | | | Rock fragments | 0.00 |
| | | Low content of organic matter | 0.12 | | | | |
| | | Too acid | 0.84 | | | | |
| 127: | | | | | | | |
| Fort Collins | 50 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.90 | | | | |
| Platner | 35 | Good | | Poor: | | Good | |
| | | | | Low strength | 0.00 | | |
| | | | | Shrink-swell | 0.98 | | |
| 128: | | | | | | | |
| Fort Collins | 50 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.90 | | | | |
| Razor, moist | 40 | Poor: | | Poor: | | Poor: | |
| | | Too clayey | 0.00 | Low strength | 0.00 | Too clayey | 0.00 |
| | | Depth to bedrock | 0.58 | Depth to bedrock | 0.00 | Depth to bedrock | 0.58 |
| | | Droughty | 0.68 | Shrink-swell | 0.39 | Slope | 0.84 |
| | | Low content of organic matter | 0.88 | | | Salinity | 0.88 |
| | | Sodium content | 0.97 | | | Sodium content | 0.98 |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 129: | | | | | | | |
| Fort | 85 | Fair: | | Poor: | | Fair: | |
| | | Sodium content | 0.60 | Low strength | 0.00 | Sodium content | 0.60 |
| | | Low content of organic matter | 0.88 | Shrink-swell | 0.87 | | |
| | | No water erosion | 0.99 | | | | |
| 130: | | | | | | | |
| Fort | 85 | Fair: | | Poor: | | Fair: | |
| | | Sodium content | 0.60 | Low strength | 0.00 | Sodium content | 0.60 |
| | | Low content of organic matter | 0.88 | Shrink-swell | 0.87 | | |
| | | No water erosion | 0.99 | | | | |
| 131: | | | | | | | |
| Fort | 55 | Fair: | | Poor: | | Fair: | |
| | | Sodium content | 0.60 | Low strength | 0.00 | Sodium content | 0.60 |
| | | Low content of organic matter | 0.88 | Shrink-swell | 0.87 | | |
| | | No water erosion | 0.99 | | | | |
| Karval | 35 | Poor: | | Fair: | | Poor: | |
| | | Droughty | 0.00 | Slope | 0.82 | Slope | 0.00 |
| | | Wind erosion | 0.00 | | | Rock fragments | 0.00 |
| | | Low content of organic matter | 0.12 | | | | |
| | | Too acid | 0.84 | | | | |
| 132: | | | | | | | |
| Fort | 50 | Fair: | | Poor: | | Fair: | |
| | | Sodium content | 0.60 | Low strength | 0.00 | Sodium content | 0.60 |
| | | Low content of organic matter | 0.88 | Shrink-swell | 0.87 | | |
| | | No water erosion | 0.99 | | | | |
| Razor | 40 | Poor: | | Poor: | | Poor: | |
| | | Too clayey | 0.00 | Low strength | 0.00 | Too clayey | 0.00 |
| | | Depth to bedrock | 0.58 | Depth to bedrock | 0.00 | Depth to bedrock | 0.58 |
| | | Droughty | 0.68 | Shrink-swell | 0.39 | Slope | 0.84 |
| | | Low content of organic matter | 0.88 | | | Salinity | 0.88 |
| | | Sodium content | 0.97 | | | Sodium content | 0.98 |
| 133: | | | | | | | |
| Haversid, rarely flooded | 85 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Sodium content | 0.98 |
| | | Water erosion | 0.90 | | | | |
| | | Sodium content | 0.97 | | | | |
| 134: | | | | | | | |
| Haverson, rarely flooded | 85 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Salinity | 0.50 |
| | | No water erosion | 0.99 | | | | |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 135: | | | | | | | |
| Haxtun | 85 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| 136: | | | | | | | |
| Haxtun, dry | 85 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| 137: | | | | | | | |
| Haxtun, dry | 55 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| Olney | 30 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| 138: | | | | | | | |
| Haxtun | 55 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| Olnest | 30 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| 139: | | | | | | | |
| Keith | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.68 | | | | |
| 140: | | | | | | | |
| Keith | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.68 | | | | |
| 141: | | | | | | | |
| Kim | 90 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.88 | | | | |
| | | No water erosion | 0.99 | | | | |
| 142: | | | | | | | |
| Kim | 90 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.88 | | | | |
| | | No water erosion | 0.99 | | | | |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 143: | | | | | | | |
| Kimst | 90 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | No water erosion | 0.99 | | | | |
| 144: | | | | | | | |
| Kimst | 90 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | No water erosion | 0.99 | | | | |
| 145: | | | | | | | |
| Las Animas, occasionally flooded | 85 | Fair: | | Fair: | | Fair: | |
| | | Low content of organic matter | 0.12 | Depth to saturated zone | 0.53 | Depth to saturated zone | 0.53 |
| 146: | | | | | | | |
| Limon, rarely flooded | 85 | Poor: | | Poor: | | Poor: | |
| | | Too alkaline | 0.00 | Low strength | 0.00 | Too clayey | 0.00 |
| | | Too clayey | 0.00 | Shrink-swell | 0.12 | Salinity | 0.88 |
| | | Low content of organic matter | 0.12 | | | Sodium content | 0.98 |
| | | Sodium content | 0.97 | | | | |
| 147: | | | | | | | |
| Limon, moist, rarely flooded | 85 | Poor: | | Poor: | | Poor: | |
| | | Too alkaline | 0.00 | Low strength | 0.00 | Too clayey | 0.00 |
| | | Too clayey | 0.00 | Shrink-swell | 0.12 | Salinity | 0.88 |
| | | Low content of organic matter | 0.12 | | | Sodium content | 0.98 |
| | | Sodium content | 0.97 | | | | |
| 148: | | | | | | | |
| Manzanola | 85 | Fair: | | Fair: | | Fair: | |
| | | Low content of organic matter | 0.12 | Low strength | 0.22 | Too clayey | 0.36 |
| | | Too clayey | 0.50 | Shrink-swell | 0.87 | | |
| | | No water erosion | 0.99 | | | | |
| 149: | | | | | | | |
| Manzanst, rarely flooded | 90 | Fair: | | Poor: | | Fair: | |
| | | Too clayey | 0.12 | Low strength | 0.00 | Too clayey | 0.09 |
| | | Low content of organic matter | 0.88 | Shrink-swell | 0.87 | Sodium content | 0.90 |
| | | Sodium content | 0.90 | | | | |
| 150: | | | | | | | |
| Manzanst | 85 | Fair: | | Poor: | | Fair: | |
| | | Too clayey | 0.12 | Low strength | 0.00 | Too clayey | 0.09 |
| | | Low content of organic matter | 0.88 | Shrink-swell | 0.87 | Sodium content | 0.90 |
| | | Sodium content | 0.90 | | | | |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 151: | | | | | | | |
| Midway | 85 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Low strength | 0.00 | Too clayey | 0.29 |
| | | Low content of organic matter | 0.12 | Shrink-swell | 0.87 | Sodium content | 0.60 |
| | | Too clayey | 0.50 | | | Salinity | 0.88 |
| | | Sodium content | 0.60 | | | | |
| 152: | | | | | | | |
| Midway, moist | 85 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Low strength | 0.00 | Too clayey | 0.29 |
| | | Low content of organic matter | 0.12 | Shrink-swell | 0.87 | Sodium content | 0.60 |
| | | Too clayey | 0.50 | | | Salinity | 0.88 |
| | | Sodium content | 0.60 | | | | |
| 153: | | | | | | | |
| Midway | 55 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Low strength | 0.00 | Too clayey | 0.29 |
| | | Low content of organic matter | 0.12 | Shrink-swell | 0.87 | Sodium content | 0.60 |
| | | Too clayey | 0.50 | | | Slope | 0.84 |
| | | Sodium content | 0.60 | | | Salinity | 0.88 |
| Razor | 30 | Poor: | | Poor: | | Poor: | |
| | | Too clayey | 0.00 | Low strength | 0.00 | Too clayey | 0.00 |
| | | Depth to bedrock | 0.58 | Depth to bedrock | 0.00 | Depth to bedrock | 0.58 |
| | | Droughty | 0.68 | Shrink-swell | 0.39 | Slope | 0.84 |
| | | Low content of organic matter | 0.88 | | | Salinity | 0.88 |
| | | Sodium content | 0.97 | | | Sodium content | 0.98 |
| 154: | | | | | | | |
| Midway, moist | 55 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Low strength | 0.00 | Too clayey | 0.29 |
| | | Low content of organic matter | 0.12 | Shrink-swell | 0.87 | Sodium content | 0.60 |
| | | Too clayey | 0.50 | | | Slope | 0.84 |
| | | Sodium content | 0.60 | | | Salinity | 0.88 |
| Razor, moist | 30 | Poor: | | Poor: | | Poor: | |
| | | Too clayey | 0.00 | Low strength | 0.00 | Too clayey | 0.00 |
| | | Depth to bedrock | 0.58 | Depth to bedrock | 0.00 | Depth to bedrock | 0.58 |
| | | Droughty | 0.68 | Shrink-swell | 0.39 | Slope | 0.84 |
| | | Low content of organic matter | 0.88 | | | Salinity | 0.88 |
| | | Sodium content | 0.97 | | | Sodium content | 0.98 |
| 155: | | | | | | | |
| Midway | 55 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Low strength | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 | Slope | 0.00 |
| | | Low content of organic matter | 0.12 | Slope | 0.08 | Too clayey | 0.29 |
| | | Too clayey | 0.50 | Shrink-swell | 0.87 | Sodium content | 0.60 |
| | | Sodium content | 0.60 | | | Salinity | 0.88 |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 155: | | | | | | | |
| Rock outcrop | 30 | Not rated | | Not rated | | Not rated | |
| 156: | | | | | | | |
| Midway, moist | 55 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Low strength | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 | Slope | 0.00 |
| | | Low content of organic matter | 0.12 | Slope | 0.08 | Too clayey | 0.29 |
| | | | | Shrink-swell | 0.87 | Sodium content | 0.60 |
| | | Too clayey | 0.50 | | | Salinity | 0.88 |
| | | Sodium content | 0.60 | | | | |
| Rock outcrop, moist | 30 | Not rated | | Not rated | | Not rated | |
| 157: | | | | | | | |
| Nunn | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| 158: | | | | | | | |
| Nunn | 55 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| Sampson, rarely flooded | 30 | Good | | Good | | Good | |
| 159: | | | | | | | |
| Nunn, dry | 50 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| Sampson, dry, rarely flooded | 35 | Good | | Good | | Good | |
| 160: | | | | | | | |
| Olnest | 85 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| 161: | | | | | | | |
| Olnest | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.88 | | | | |
| 162: | | | | | | | |
| Olnest | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.88 | | | | |
| 163: | | | | | | | |
| Olnest | 90 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.88 | | | Slope | 0.96 |
| 164: | | | | | | | |
| Olney | 85 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 165: | | | | | | | |
| Olney | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| 166: | | | | | | | |
| Olney | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| 167: | | | | | | | |
| Olney | 90 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Slope | 0.96 |
| 168: | | | | | | | |
| Olney | 55 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| Midway | 30 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Low strength | 0.00 | Too clayey | 0.29 |
| | | Low content of organic matter | 0.12 | Shrink-swell | 0.87 | Sodium content | 0.60 |
| | | Too clayey | 0.50 | | | Salinity | 0.88 |
| | | Sodium content | 0.60 | | | | |
| 169: | | | | | | | |
| Otero | 85 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Too sandy | 0.94 |
| | | Too sandy | 0.94 | | | | |
| 170: | | | | | | | |
| Oterodry | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.50 | | | | |
| 171: | | | | | | | |
| Oterodry | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.50 | | | | |
| 172: | | | | | | | |
| Platner | 85 | Good | | Poor: | | Good | |
| | | | | Low strength | 0.00 | | |
| | | | | Shrink-swell | 0.99 | | |
| 173: | | | | | | | |
| Platner | 50 | Good | | Poor: | | Good | |
| | | | | Low strength | 0.00 | | |
| | | | | Shrink-swell | 0.98 | | |
| Ascalon | 35 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | No water erosion | 0.99 | | | | |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 174: Pleasant, rarely ponded | 90 | Poor: Too clayey | 0.00 | Poor: Low strength; Depth to saturated zone; Shrink-swell | 0.00; 0.00; 0.39 | Poor: Too clayey; Depth to saturated zone | 0.00; 0.00 |
| 175: Rago, rarely flooded | 90 | Fair: Too clayey; No water erosion | 0.50; 0.99 | Poor: Low strength; Shrink-swell | 0.00; 0.97 | Fair: Too clayey | 0.44 |
| 176: Rago, dry, rarely flooded | 90 | Fair: Too clayey; No water erosion | 0.50; 0.99 | Poor: Low strength; Shrink-swell | 0.00; 0.97 | Fiar: Too clayey | 0.44 |
| 177: Razor | 85 | Poor: Too clayey; Sodium content; Droughty; Depth to bedrock; Low content of organic matter | 0.00; 0.00; 0.57; 0.58; 0.88 | Poor: Low strength; Depth to bedrock; Shrink-swell | 0.00; 0.00; 0.39 | Poor: Too clayey; Depth to bedrock; Salinity; Sodium content | 0.00; 0.58; 0.88; 0.98 |
| 178: Razor, moist | 85 | Poor: Too clayey; Sodium content; Droughty; Depth to bedrock; Low content of organic matter | 0.00; 0.00; 0.57; 0.58; 0.88 | Poor: Low strength; Depth to bedrock; Shrink-swell | 0.00; 0.00; 0.39 | Poor: Too clayey; Depth to bedrock; Salinity; Sodium content | 0.00; 0.58; 0.88; 0.98 |
| 179: Sampson, rarely flooded | 90 | Good | | Good | | Good | |
| 180: Sampson, dry, rarely flooded | 90 | Good | | Good | | Good | |
| 181: Satanta | 90 | Fair: Low content of organic matter; Water erosion | 0.12; 0.90 | Good | | Good | |
| 182: Satanta, dry | 90 | Fair: Low content of organic matter; Water erosion | 0.12; 0.90 | Good | | Good | |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 183: | | | | | | | |
| Seldom, rarely flooded | 85 | Poor: | | Poor: | | Poor: | |
| | | Too alkaline | 0.00 | Depth to saturated zone | 0.00 | Depth to saturated zone | 0.00 |
| | | Low content of organic matter | 0.88 | | | | |
| 184: | | | | | | | |
| Shingle | 55 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Low strength | 0.22 | | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.90 | | | | |
| Midway | 30 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Low strength | 0.00 | Too clayey | 0.29 |
| | | Low content of organic matter | 0.12 | Shrink-swell | 0.87 | Sodium content | 0.60 |
| | | Too clayey | 0.50 | | | Salinity | 0.88 |
| | | Sodium content | 0.60 | | | | |
| 185: | | | | | | | |
| Shingle, moist | 55 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Low strength | 0.22 | | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.90 | | | | |
| Midway, moist | 30 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Low strength | 0.00 | Too clayey | 0.29 |
| | | Low content of organic matter | 0.12 | Shrink-swell | 0.87 | Sodium content | 0.60 |
| | | Too clayey | 0.50 | | | Salinity | 0.88 |
| | | Sodium content | 0.60 | | | | |
| 186: | | | | | | | |
| Sundance | 85 | Poor: | | Poor: | | Good | |
| | | Wind erosion | 0.00 | Low strength | 0.00 | | |
| | | Low content of organic matter | 0.12 | Shrink-swell | 0.94 | | |
| | | Water erosion | 0.90 | | | | |
| 187: | | | | | | | |
| Table Mountain, rarely flooded | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.50 | | | | |
| | | No water erosion | 0.99 | | | | |
| 188: | | | | | | | |
| Travessilla | 60 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Slope | 0.00 | Slope | 0.00 |
| | | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 |
| | | Low content of organic matter | 0.12 | | | | |
| Rock outcrop | 25 | Not rated | | Not rated | | Not rated | |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 189: | | | | | | | |
| Truckton | 85 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Too sandy | 0.78 |
| | | Droughty | 0.58 | | | | |
| | | Too sandy | 0.78 | | | | |
| 190: | | | | | | | |
| Truckton | 85 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Too sandy | 0.78 |
| | | Droughty | 0.58 | | | | |
| | | Too sandy | 0.78 | | | | |
| 191: | | | | | | | |
| Truckton, dry | 85 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Too sandy | 0.78 |
| | | Droughty | 0.58 | | | | |
| | | Too sandy | 0.78 | | | | |
| 192: | | | | | | | |
| Truckton, dry | 85 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Too sandy | 0.78 |
| | | Droughty | 0.58 | | | | |
| | | Too sandy | 0.78 | | | | |
| 193: | | | | | | | |
| Valent | 85 | Poor: | | Good | | Fair: | |
| | | Wind erosion | 0.00 | | | Too sandy | 0.06 |
| | | Too sandy | 0.06 | | | Slope | 0.37 |
| | | Low content of organic matter | 0.12 | | | | |
| | | Droughty | 0.35 | | | | |
| 194: | | | | | | | |
| Valent | 55 | Poor: | | Good | | Fair: | |
| | | Wind erosion | 0.00 | | | Too sandy | 0.06 |
| | | Too sandy | 0.06 | | | | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Droughty | 0.35 | | | | |
| Bijou | 30 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| | | Droughty | 0.97 | | | | |
| 195: | | | | | | | |
| Valent | 60 | Poor: | | Good | | Fair: | |
| | | Wind erosion | 0.00 | | | Slope | 0.04 |
| | | Too sandy | 0.06 | | | Too sandy | 0.06 |
| | | Low content of organic matter | 0.12 | | | | |
| | | Droughty | 0.35 | | | | |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 195: | | | | | | | |
| Vona | 30 | Poor: | | Good | | Fair: | |
| | | Wind erosion | 0.00 | | | Too sandy | 0.94 |
| | | Low content of organic matter | 0.12 | | | Slope | 0.96 |
| | | Too sandy | 0.94 | | | | |
| 196: | | | | | | | |
| Valent | 55 | Poor: | | Good | | Fair: | |
| | | Wind erosion | 0.00 | | | Slope | 0.04 |
| | | Too sandy | 0.06 | | | Too sandy | 0.06 |
| | | Low content of organic matter | 0.12 | | | | |
| | | Droughty | 0.35 | | | | |
| Vonid | 35 | Poor: | | Good | | Fair: | |
| | | Wind erosion | 0.00 | | | Slope | 0.96 |
| | | Low content of organic matter | 0.88 | | | | |
| 197: | | | | | | | |
| Vona | 85 | Poor: | | Good | | Fair: | |
| | | Wind erosion | 0.00 | | | Too sandy | 0.94 |
| | | Low content of organic matter | 0.12 | | | | |
| | | Too sandy | 0.94 | | | | |
| 198: | | | | | | | |
| Vona | 85 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Too sandy | 0.94 |
| | | Too sandy | 0.94 | | | | |
| 199: | | | | | | | |
| Vona | 85 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Too sandy | 0.94 |
| | | Too sandy | 0.94 | | | Slope | 0.96 |
| 200: | | | | | | | |
| Vona | 35 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Too sandy | 0.94 |
| | | Too sandy | 0.94 | | | | |
| Karval | 30 | Poor: | | Fair: | | Poor: | |
| | | Droughty | 0.00 | Slope | 0.82 | Slope | 0.00 |
| | | Wind erosion | 0.00 | | | Rock fragments | 0.00 |
| | | Low content of organic matter | 0.12 | | | | |
| | | Too acid | 0.84 | | | | |
| Midway, moist | 20 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Low strength | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 | Slope | 0.00 |
| | | Low content of organic matter | 0.12 | Slope | 0.82 | Too clayey | 0.29 |
| | | Too clayey | 0.50 | Shrink-swell | 0.87 | Sodium Content | 0.60 |
| | | Sodium content | 0.60 | | | Salinity | 0.88 |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 201: | | | | | | | |
| Vona | 55 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Too sandy | 0.94 |
| | | Too sandy | 0.94 | | | | |
| Midway, moist | 30 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Low strength | 0.00 | Too clayey | 0.29 |
| | | Low content of organic matter | 0.12 | Shrink-swell | 0.87 | Sodium content | 0.60 |
| | | Too clayey | 0.50 | | | Salinity | 0.88 |
| | | Sodium content | 0.60 | | | | |
| 202: | | | | | | | |
| Vona | 60 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.12 | | | Slope | 0.04 |
| | | Too sandy | 0.94 | | | Too sandy | 0.94 |
| Seldom | 20 | Poor: | | Poor: | | Poor: | |
| | | Too alkaline | 0.00 | Depth to saturated zone | 0.00 | Depth to saturated zone | 0.00 |
| | | Low content of organic matter | 0.88 | | | Slope | 0.04 |
| 203: | | | | | | | |
| Vonid | 85 | Poor: | | Good | | Good | |
| | | Wind erosion | 0.00 | | | | |
| | | Low content of organic matter | 0.88 | | | | |
| 204: | | | | | | | |
| Vonid | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.88 | | | | |
| 205: | | | | | | | |
| Vonid | 85 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.88 | | | Slope | 0.96 |
| 206: | | | | | | | |
| Vonid | 35 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.88 | | | | |
| Karval | 30 | Poor: | | Fair: | | Poor: | |
| | | Droughty | 0.00 | Slope | 0.82 | Slope | 0.00 |
| | | Wind erosion | 0.00 | | | Rock fragments | 0.00 |
| | | Low content of organic matter | 0.12 | | | | |
| | | Too acid | 0.84 | | | | |
| Midway | 20 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Low strength | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 | Slope | 0.00 |
| | | Low content of organic matter | 0.12 | Slope | 0.82 | Too clayey | 0.29 |
| | | | | Shrink-swell | 0.87 | Sodium content | 0.60 |
| | | Too clayey | 0.50 | | | Salinity | 0.88 |
| | | Sodium content | 0.60 | | | | |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 207: | | | | | | | |
| Vonid | 55 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.88 | | | | |
| Midway | 30 | Poor: | | Poor: | | Poor: | |
| | | Droughty | 0.00 | Depth to bedrock | 0.00 | Depth to bedrock | 0.00 |
| | | Depth to bedrock | 0.00 | Low strength | 0.00 | Too clayey | 0.29 |
| | | Low content of organic matter | 0.12 | Shrink-swell | 0.87 | Sodium content | 0.60 |
| | | Too clayey | 0.50 | | | Salinity | 0.88 |
| | | Sodium content | 0.60 | | | | |
| 208: | | | | | | | |
| Vonid | 65 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.88 | | | Slope | 0.04 |
| Seldom | 20 | Poor: | | Poor: | | Poor: | |
| | | Too alkaline | 0.00 | Depth to saturated zone | 0.00 | Depth to saturated zone | 0.00 |
| | | Low content of organic matter | 0.88 | | | Slope | 0.04 |
| 209: | | | | | | | |
| Wages | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.88 | | | | |
| 210: | | | | | | | |
| Wages | 85 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.88 | | | Slope | 0.96 |
| | | Water erosion | 0.90 | | | | |
| 211: | | | | | | | |
| Wages, dry | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.88 | | | | |
| | | Water erosion | 0.90 | | | | |
| 212: | | | | | | | |
| Wages | 60 | Fair: | | Good | | Fair: | |
| | | Low content of organic matter | 0.88 | | | Slope | 0.63 |
| | | Water erosion | 0.90 | | | | |
| Karval | 25 | Poor: | | Good | | Poor: | |
| | | Droughty | 0.00 | | | Rock fragments | 0.00 |
| | | Wind erosion | 0.00 | | | Slope | 0.63 |
| | | Low content of organic matter | 0.12 | | | | |
| | | Too acid | 0.84 | | | | |
| 213: | | | | | | | |
| Weld | 85 | Fair: | | Poor: | | Good | |
| | | No water erosion | 0.99 | Low strength | 0.00 | | |
| 214: | | | | | | | |
| Weld, dry | 85 | Fair: | | Poor: | | Good | |
| | | No water erosion | 0.99 | Low strength | 0.00 | | |

Table 15b.--Construction Materials--Continued

| Map symbol and soil name | Pct. of map unit | Potential source of reclamation material | | Potential source of roadfill | | Potential source of topsoil | |
|---|---|---|---|---|---|---|---|
| | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 215: | | | | | | | |
| Wiley | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.68 | | | | |
| 216: | | | | | | | |
| Wiley | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.68 | | | | |
| 217: | | | | | | | |
| Wilid | 85 | Fair: | | Good | | Good | |
| | | Low content of organic matter | 0.12 | | | | |
| | | Water erosion | 0.68 | | | | |
| 218: | | | | | | | |
| Water | 90 | Not rated | | Not rated | | Not rated | |
| 219: | | | | | | | |
| Gravel pits | 100 | Not rated | | Not rated | | Not rated | |
| 220: | | | | | | | |
| Access denied | 100 | Not rated | | Not rated | | Not rated | |

Table 16.--Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

| Map symbol and soil name | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 101: Apishapa, rarely ponded | Slight | Severe: ponding. | Severe: no water. | Frost action, percs slowly, ponding. | Percs slowly, ponding. | Percs slowly, ponding. | Percs slowly, wetness. |
| 102: Arvada | Slight | Severe: excess sodium. | Severe: no water. | Deep to water | Excess sodium, percs slowly. | Percs slowly | Excess sodium, percs slowly, too arid. |
| 103: Ascalon | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Soil blowing | Erodes easily, soil blowing. | Erodes easily, too arid. |
| 104: Ascalon | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing. | Erodes easily, soil blowing. | Erodes easily, too arid. |
| 105: Ascalon | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing. | Erodes easily, soil blowing. | Erodes easily, too arid. |
| 106: Ascalon, dry | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Soil blowing | Erodes easily, soil blowing. | Erodes easily, too arid. |
| 107: Ascalon, dry | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing. | Erodes easily, soil blowing. | Erodes easily, too arid. |
| 108: Ascalon, dry | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing. | Erodes easily, soil blowing. | Erodes easily, too arid. |
| 109: Ascalon | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Soil blowing | Erodes easily, soil blowing. | Erodes easily, too arid. |
| Haxtun | Severe: seepage. | Moderate: piping, thin layer. | Severe: no water. | Deep to water | Fast intake, soil blowing. | Soil blowing | Favorable. |
| 110: Ascalon, dry | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Soil blowing | Erodes easily, soil blowing. | Erodes easily, too arid. |
| Haxtun, dry | Severe: seepage. | Moderate: piping, thin layer. | Severe: no water. | Deep to water | Fast intake, soil blowing. | Soil blowing | Favorable. |
| 111: Bacid | Moderate: seepage. | Moderate: piping. | Severe: no water. | Deep to water | Erodes easily, percs slowly. | Erodes easily | Erodes easily, too arid. |
| 112: Bankard, occasionally flooded | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Fast intake, soil blowing, droughty. | Too sandy, soil blowing. | Too arid, droughty. |

Table 16.--Water Management--Continued

| Map symbol and soil name | Limitations for-- | | | Features affecting-- | | | |
|---|---|---|---|---|---|---|---|
| | Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Drainage | Irrigation | Terraces and diversions | Grassed waterways |
| 112: Glenberg, occasionally flooded | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Flooding, soil blowing, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| 113: Bijou | Severe: seepage. | Severe: thin layer. | Severe: no water. | Deep to water | Fast intake, droughty. | Soil blowing | Too arid, droughty. |
| 114: Bijou, moist | Severe: seepage. | Severe: thin layer. | Severe: no water. | Deep to water | Fast intake, droughty. | Soil blowing | Too arid, droughty. |
| 115: Bijou, moist | Severe: seepage. | Severe: thin layer. | Severe: no water. | Deep to water | Fast intake, slope, droughty. | Soil blowing | Too arid, droughty. |
| 116: Blakeland | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Fast intake, slope, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| 117: Bresser | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, soil blowing, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| 118: Campo | Moderate: seepage. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily, percs slowly. | Erodes easily | Erodes easily, percs slowly, too arid. |
| 119: Canyon | Severe: slope, depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Slope, depth to rock. | Slope, depth to rock. | Slope, too arid. |
| Rock outcrop | Severe: slope, depth to rock. | Slight | Severe: no water. | Deep to water | Slope, depth to rock. | Slope, depth to rock. | Slope, depth to rock. |
| 120: Colby | Moderate: seepage. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily | Erodes easily | Erodes easily, too arid. |
| 121: Colby | Moderate: seepage, slope. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily, slope. | Erodes easily | Erodes easily, too arid. |
| 122: Colby | Moderate: seepage, slope. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily, slope. | Erodes easily | Erodes easily. too arid. |
| Weld | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily, percs slowly. | Erodes easily, percs slowly. | Erodes easily, percs slowly, too arid. |
| 123: Firstview. | | | | | | | |

Table 16.--Water Management--Continued

| Map symbol and soil name | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 124: Fort Collins | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Favorable | Erodes easily | Erodes easily, too arid. |
| 125: Fort Collins | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope | Erodes easily | Erodes easily, too arid. |
| 126: Fort Collins | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope | Erodes easily | Erodes easily, too arid. |
| Karval | Severe: seepage, slope. | Severe: seepage. | Severe: no water. | Deep to water | Slope, droughty. | Slope, too sandy. | Slope, too arid, droughty. |
| 127: Fort Collins | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope | Erodes easily | Erodes easily, too arid. |
| Platner | Moderate: seepage, slope. | Moderate: piping, thin layer. | Severe: no water. | Deep to water | Percs slowly, slope. | Percs slowly | Percs slowly, too arid. |
| 128: Fort Collins | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope | Erodes easily | Erodes easily, too arid. |
| Razor, moist | Severe: slope. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, slope, depth to rock. | Slope, too arid, depth to rock. |
| 129: Fort | Moderate: seepage. | Moderate: piping. | Severe: no water. | Deep to water | Excess salt, percs slowly. | Erodes easily, percs slowly. | Erodes easily, too arid. |
| 130: Fort | Moderate: seepage, slope. | Moderate: piping. | Severe: no water. | Deep to water | Excess salt, percs slowly, slope. | Erodes easily, percs slowly. | Erodes easily, too arid. |
| 131: Fort | Moderate: seepage, slope. | Moderate: piping. | Severe: no water. | Deep to water | Excess salt, percs slowly, slope. | Erodes easily, percs slowly. | Erodes easily, too arid. |
| Karval | Severe: seepage, slope. | Severe: seepage. | Severe: no water. | Deep to water | Slope, droughty. | Slope, too sandy. | Slope, too arid, droughty. |
| 132: Fort | Moderate: seepage, slope. | Moderate: piping. | Severe: no water. | Deep to water | Excess salt, percs slowly, slope. | Erodes easily, percs slowly. | Erodes easily, too arid. |
| Razor | Severe: slope. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, slope, depth to rock. | Slope, too arid, depth to rock. |
| 133: Haversid, rarely flooded | Moderate: seepage. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily, excess salt. | Erodes easily | Erodes easily, too arid. |

Table 16.--Water Management--Continued

| Map symbol and soil name | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 134: Haverson, rarely flooded | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily, excess salt. | Erodes easily | Erodes easily, too arid. |
| 135: Haxtun | Severe: seepage. | Moderate: piping, thin layer. | Severe: no water. | Deep to water | Fast intake, soil blowing. | Soil blowing | Favorable. |
| 136: Haxtun, dry | Severe: seepage. | Moderate: piping, thin layer. | Severe: no water. | Deep to water | Fast intake, soil blowing. | Soil blowing | Favorable. |
| 137: Haxtun, dry | Severe: seepage. | Moderate: piping, thin layer. | Severe: no water. | Deep to water | Fast intake, soil blowing. | Soil blowing | Favorable. |
| Olney | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Fast intake, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| 138: Haxtun | Severe: seepage. | Moderate: piping, thin layer. | Severe: no water. | Deep to water | Fast intake, soil blowing. | Soil blowing | Favorable. |
| Olnest | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Soil blowing, droughty. | Soil blowing | Too arid, droughty. |
| 139: Keith | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Favorable | Erodes easily | Erodes easily, too arid. |
| 140: Keith | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope | Erodes easily | Erodes easily, too arid. |
| 141: Kim | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Favorable | Erodes easily | Erodes easily, too arid. |
| 142: Kim | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope | Erodes easily | Erodes easily, too arid. |
| 143: Kimst | Moderate: seepage. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily | Erodes easily | Erodes easily, too arid. |
| 144: Kimst | Moderate: seepage, slope. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily, slope. | Erodes easily | Erodes easily, too arid. |
| 145: Las Animas, occasionally flooded | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Flooding, frost action. | Wetness, droughty. | Too sandy, wetness. | Wetness, droughty. |

Table 16.--Water Management--Continued

| Map symbol and soil name | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 146: Limon, rarely flooded | Slight | Severe: hard to pack. | Severe: no water. | Deep to water | Percs slowly, slow intake. | Percs slowly | Excess salt, percs slowly, too arid. |
| 147: Limon, moist, rarely flooded | Slight | Severe: hard to pack. | Severe: no water. | Deep to water | Percs slowly, slow intake. | Percs slowly | Excess salt, percs slowly, too arid. |
| 148: Manzanola | Moderate: slope. | Severe: piping. | Severe: no water. | Deep to water | Percs slowly, slope. | Erodes easily, percs slowly. | Erodes easily, too arid. |
| 149: Manzanst, rarely flooded | Slight | Slight | Severe: no water. | Deep to water | Percs slowly | Percs slowly | Percs slowly, too arid. |
| 150: Manzanst | Moderate: slope. | Slight | Severe: no water. | Deep to water | Percs slowly, slope. | Percs slowly | Percs slowly, too arid. |
| 151: Midway | Severe: depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, depth to rock. | Too arid, depth to rock. |
| 152: Midway, moist | Severe: depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, depth to rock. | Too arid, depth to rock. |
| 153: Midway | Severe: slope, depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, slope, depth to rock. | Slope, too arid, depth to rock. |
| Razor | Severe: slope. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, slope, depth to rock. | Slope, too arid, depth to rock. |
| 154: Midway, moist | Severe: slope, depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, slope, depth to rock. | Slope, too arid, depth to rock. |
| Razor, moist | Severe: slope. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, slope, depth to rock. | Slope, too arid, depth to rock. |
| 155: Midway | Severe: slope, depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, slope, depth to rock. | Slope, too arid, depth to rock. |
| Rock outcrop | Severe: slope, depth to rock. | Severe: area reclaim. | Severe: no water. | Deep to water | Slope, depth to rock. | Slope, depth to rock. | Slope, depth to rock. |

Table 16.--Water Management--Continued

| Map symbol and soil name | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 156: | | | | | | | |
| Midway, moist | Severe: slope, depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, slope, depth to rock. | Slope, too arid, depth to rock. |
| Rock outcrop, moist | Severe: slope, depth to rock. | Severe: area reclaim. | Severe: no water. | Deep to water | Slope, depth to rock. | Slope, depth to rock. | Slope, depth to rock. |
| 157: | | | | | | | |
| Nunn | Severe: seepage. | Moderate: piping. | Severe: no water. | Deep to water | Percs slowly, slope. | Favorable | Percs slowly, too arid. |
| 158: | | | | | | | |
| Nunn | Severe: seepage. | Moderate: piping. | Severe: no water. | Deep to water | Percs slowly | Favorable | Percs slowly, too arid. |
| Sampson, rarely flooded | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Favorable | Favorable | Favorable. |
| 159: | | | | | | | |
| Nunn, dry | Severe: seepage. | Moderate: piping. | Severe: no water. | Deep to water | Percs slowly | Fevorable | Percs slowly, too arid. |
| Sampson, dry, rarely flooded | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Favorable | Favorable | Favorable. |
| 160: | | | | | | | |
| Olnest | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing, droughty. | Soil blowing | Too arid, droughty. |
| 161: | | | | | | | |
| Olnest | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Soil blowing | Soil blowing | Too arid. |
| 162: | | | | | | | |
| Olnest | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing. | Soil blowing | Too arid. |
| 163: | | | | | | | |
| Olnest | Severe: seepage, slope. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing. | Slope, soil blowing. | Slope, too arid. |
| 164: | | | | | | | |
| Olney | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Fast intake, slope, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| 165: | | | | | | | |
| Olney | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Droughty | Too sandy, soil blowing. | Too arid, droughty. |
| 166: | | | | | | | |
| Olney | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, droughty. | Too sandy, soil blowing. | Too arid, droughty. |

Table 16.--Water Management--Continued

| Map symbol and soil name | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 167: Olney | Severe: seepage, slope. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, droughty. | Slope, too sandy, soil blowing. | Slope, too arid, droughty. |
| 168: Olney | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| Midway | Severe: depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, depth to rock. | Too arid, depth to rock. |
| 169: Otero | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, droughty. | Soil blowing | Too arid, droughty. |
| 170: Oterodry | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing. | Soil blowing | Too arid. |
| 171: Oterodry | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing. | Soil blowing | Too arid. |
| 172: Platner | Moderate: seepage. | Moderate: piping, thin layer. | Severe: no water. | Deep to water | Percs slowly | Percs slowly | Percs slowly, too arid. |
| 173: Platner | Moderate: seepage. | Moderate: piping, thin layer. | Severe: no water. | Deep to water | Percs slowly | Percs slowly | Percs slowly, too arid. |
| Ascalon | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Soil blowing | Erodes easily, soil blowing. | Erodes easily, too arid. |
| 174: Pleasant, rarely ponded | Slight | Severe: ponding. | Severe: no water. | Percs slowly, ponding. | Percs slowly, ponding. | Percs slowly, ponding. | Percs slowly, wetness, too arid. |
| 175: Rago, rarely flooded | Severe: seepage. | Moderate: piping, thin layer. | Severe: no water. | Deep to water | Erodes easily, percs slowly. | Erodes easily, percs slowly. | Erodes easily, percs slowly. |
| 176: Rago, dry, rarely flooded | Severe: seepage. | Moderate: piping, thin layer. | Severe: no water. | Deep to water | Erodes easily, percs slowly. | Erodes easily, percs slowly. | Erodes easily, percs slowly. |
| 177: Razor | Moderate: slope, depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, depth to rock. | Too arid, depth to rock. |

Table 16.--Water Management--Continued

| Map symbol and soil name | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 178: Razor, moist | Moderate: slope, depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, depth to rock. | Too arid, depth to rock. |
| 179: Sampson, rarely flooded | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Favorable | Favorable | Favorable. |
| 180: Sampson, dry, rarely flooded | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Favorable | Favorable | Favorable. |
| 181: Satanta | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Favorable | Erodes easily | Erodes easily, too arid. |
| 182: Satanta, dry | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Favorable | Erodes easily | Erodes easily, too arid. |
| 183: Seldom, rarely flooded | Severe: seepage. | Severe: piping, wetness. | Severe: slow refill. | Favorable | Percs slowly, wetness, soil blowing. | Wetness, soil blowing. | Wetness. |
| 184: Shingle | Severe: depth to rock. | Severe: piping. | Severe: no water. | Deep to water | Slope, depth to rock. | Erodes easily, depth to rock. | Erodes easily, too arid. |
| Midway | Severe: depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, depth to rock. | Too arid, depth to rock. |
| 185: Shingle, moist | Severe: depth to rock. | Severe: piping. | Severe: no water. | Deep to water | Slope, depth to rock. | Erodes easily, depth to rock. | Erodes easily, too arid. |
| Midway, moist | Severe: depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, depth to rock. | Too arid, depth to rock. |
| 186: Sundance | Moderate: seepage. | Severe: piping. | Severe: no water. | Deep to water | Fast intake, soil blowing. | Erodes easily, soil blowing. | Erodes easily, too arid. |
| 187: Table Mountain, rarely flooded | Moderate: seepage. | Severe: piping. | Severe: no water. | Deep to water | Favorable | Erodes easily | Erodes easily. |
| 188: Travessilla | Severe: slope, depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Slope, soil blowing, droughty. | Large stones, slope, depth to rock. | Large stones, slope, too arid. |
| Rock outcrop | Severe: slope, depth to rock. | Slight | Severe: no water. | Deep to water | Slope, depth to rock. | Slope, depth to rock. | Slope, depth to rock. |

Table 16.--Water Management--Continued

| Map symbol and soil name | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 189: | | | | | | | |
| Truckton | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, soil blowing, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| 190: | | | | | | | |
| Truckton | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, soil blowing, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| 191: | | | | | | | |
| Truckton, dry | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, soil blowing, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| 192: | | | | | | | |
| Truckton, dry | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, soil blowing, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| 193: | | | | | | | |
| Valent | Severe: seepage, slope. | Severe: seepage, piping. | Severe: no water, | Deep to water | Fast intake, slope, droughty. | Slope, too sandy, soil blowing. | Slope, too arid, droughty. |
| 194: | | | | | | | |
| Valent | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Fast intake, slope, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| Bijou | Severe: seepage. | Severe: thin layer. | Severe: no water. | Deep to water | Fast intake, slope, droughty. | Soil blowing | Too arid, droughty. |
| 195: | | | | | | | |
| Valent | Severe: seepage, slope. | Severe: seepage, piping. | Severe: no water. | Deep to water | Fast intake, slope, droughty. | Slope, too sandy, soil blowing. | Slope, too arid, droughty. |
| Vona | Severe: seepage, slope. | Severe: seepage, piping. | Severe: no water. | Deep to water | Fast intake, slope, droughty. | Slope, too sandy, soil blowing. | Slope, too arid, droughty. |
| 196: | | | | | | | |
| Valent | Severe: seepage, slope. | Severe: seepage, piping. | Severe: no water. | Deep to water | Fast intake, slope, droughty. | Slope, too sandy, soil blowing. | Slope, too arid, droughty. |
| Vonid | Severe: seepage, slope. | Severe: seepage, piping. | Severe: no water. | Deep to water | Fast intake, slope, droughty. | Slope, too sandy, soil blowing. | Slope, too arid, droughty. |
| 197: | | | | | | | |
| Vona | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Fast intake, slope, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| 198: | | | | | | | |
| Vona | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, droughty. | Too sandy, soil blowing. | Too arid, droughty. |

Table 16.--Water Management--Continued

| Map symbol and soil name | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 199: | | | | | | | |
| Vona | Severe: seepage, slope. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, droughty. | Slope, too sandy, soil blowing. | Slope, too arid, droughty. |
| 200: | | | | | | | |
| Vona | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| Karval | Severe: seepage, slope. | Severe: seepage. | Severe: no water. | Deep to water | Slope, droughty. | Slope, too sandy. | Slope, too arid, droughty. |
| Midway, moist | Severe: slope, depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, slope, depth to rock. | Slope, too arid, depth to rock. |
| 201: | | | | | | | |
| Vona | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, droughty. | Too sandy, soil blowing. | Too arid, droughty. |
| Midway, moist | Severe: depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, depth to rock. | Too arid, depth to rock. |
| 202: | | | | | | | |
| Vona | Severe: seepage, slope. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, droughty. | Slope, too sandy, soil blowing. | Slope, too arid, droughty. |
| Seldom | Severe: seepage, slope. | Severe: piping, wetness. | Severe: slow refill. | Slope | Slope, wetness, soil blowing. | Slope, wetness, soil blowing. | Slope, wetness. |
| 203: | | | | | | | |
| Vonid | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing, droughty. | Soil blowing | Too arid, droughty. |
| 204: | | | | | | | |
| Vonid | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing. | Soil blowing | Too arid. |
| 205: | | | | | | | |
| Vonid | Severe: seepage, slope. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing. | Slope, soil blowing. | Slope, too arid. |
| 206: | | | | | | | |
| Vonid | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing. | Soil blowing | Too arid. |
| Karval | Severe: seepage, slope. | Severe: seepage. | Severe: no water. | Deep to water | Slope, droughty. | Slope, too sandy. | Slope, too arid, droughty. |
| Midway | Severe: slope, depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, slope, depth to rock. | Slope, too arid, depth to rock. |

Table 16.--Water Management--Continued

| Map symbol and soil name | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 207: | | | | | | | |
| Vonid | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing. | Soil blowing | Too arid. |
| Midway | Severe: depth to rock. | Severe: thin layer. | Severe: no water. | Deep to water | Percs slowly, slope, depth to rock. | Percs slowly, depth to rock. | Too arid, depth to rock. |
| 208: | | | | | | | |
| Vonid | Severe: seepage, slope. | Severe: piping. | Severe: no water. | Deep to water | Slope, soil blowing. | Slope, soil blowing. | Slope, too arid. |
| Seldom | Severe: seepage, slope. | Severe: piping, wetness. | Severe: slow refill. | Slope | Slope, wetness, soil blowing. | Slope, wetness, soil blowing. | Slope, wetness. |
| 209: | | | | | | | |
| Wages | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope | Favorable | Too arid. |
| 210: | | | | | | | |
| Wages | Severe: seepage, slope. | Severe: piping. | Severe: no water. | Deep to water | Slope | Erodes easily, slope. | Erodes easily, slope, too arid. |
| 211: | | | | | | | |
| Wages, dry | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Slope | Erodes easily | Erodes easily, too arid. |
| 212: | | | | | | | |
| Wages | Severe: seepage, slope. | Severe: piping. | Severe: no water. | Deep to water | Slope | Erodes easily, slope. | Erodes easily, slope, too arid. |
| Karval | Severe: seepage, slope. | Severe: seepage. | Severe: no water. | Deep to water | Slope, droughty. | Slope, too sandy. | Slope, too arid, droughty. |
| 213: | | | | | | | |
| Weld | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily, percs slowly. | Erodes easily, percs slowly. | Erodes easily, percs slowly, too arid. |
| 214: | | | | | | | |
| Weld, dry | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily, percs slowly. | Erodes easily, percs slowly. | Erodes easily, percs slowly, too arid. |
| 215: | | | | | | | |
| Wiley | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily | Erodes easily | Erodes easily, too arid. |
| 216: | | | | | | | |
| Wiley | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily, slope. | Erodes easily | Erodes easily, too arid. |
| 217: | | | | | | | |
| Wilid | Severe: seepage. | Severe: piping. | Severe: no water. | Deep to water | Erodes easily | Erodes easily | Erodes easily, too arid. |
| 218: | | | | | | | |
| Water. | | | | | | | |

Table 16.--Water Management--Continued

| Map symbol and soil name | Limitations for-- | | | Features affecting-- | | | |
|---|---|---|---|---|---|---|---|
| | Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Drainage | Irrigation | Terraces and diversions | Grassed waterways |
| 219: Gravel pits | Severe: seepage. | Severe: seepage. | Severe: no water. | Deep to water | Fast intake, droughty. | Large stones, too sandy. | Large stones, droughty. |
| 220: Access denied. | | | | | | | |

**Table 17.--Engineering Index Properties**

**(Absence of an entry indicates that the data were not estimated.)**

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 101: | | | | | | | | | | | | |
| Apishapa, rarely ponded | 0-8 | Clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 8-60 | Silty clay | CH, CL | A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 75-95 | 30-55 | 10-30 |
| 102: | | | | | | | | | | | | |
| Arvada | 0-4 | Clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-25 | Clay | CL | A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 40-50 | 15-25 |
| | 25-44 | Clay | CH, CL | A-7 | 0 | 0 | 100 | 100 | 90-100 | 75-95 | 40-60 | 15-35 |
| | 44-60 | Clay loam | CL | A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 30-45 | 10-20 |
| 103: | | | | | | | | | | | | |
| Ascalon | 0-4 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 95-100 | 90-100 | 60-75 | 30-40 | 25-30 | 5-10 |
| | 4-15 | Sandy clay loam | CL, SC, SC-SM | A-4 | 0 | 0 | 95-100 | 95-100 | 75-90 | 35-55 | 25-30 | 5-10 |
| | 15-60 | Fine sandy loam | CL-ML, CL, SC, SC-SM | A-4 | 0 | 0 | 95-100 | 95-100 | 65-95 | 40-70 | 25-30 | 5-10 |
| 104: | | | | | | | | | | | | |
| Ascalon | 0-4 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 95-100 | 90-100 | 60-75 | 30-40 | 25-30 | 5-10 |
| | 4-15 | Sandy clay loam | CL, SC-SM, SC | A-4 | 0 | 0 | 95-100 | 95-100 | 75-90 | 35-55 | 25-30 | 5-10 |
| | 15-60 | Fine sandy loam | CL, SC-SM, CL-ML, SC | A-4 | 0 | 0 | 95-100 | 95-100 | 65-95 | 40-70 | 25-30 | 5-10 |
| 105: | | | | | | | | | | | | |
| Ascalon | 0-4 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 95-100 | 90-100 | 60-75 | 30-40 | 25-30 | 5-10 |
| | 4-15 | Sandy clay loam | CL, SC-SM, SC | A-4 | 0 | 0 | 95-100 | 95-100 | 75-90 | 35-55 | 25-30 | 5-10 |
| | 15-60 | Fine sandy loam | CL-ML, CL, SC, SC-SM | A-4 | 0 | 0 | 95-100 | 95-100 | 65-95 | 40-70 | 25-30 | 5-10 |
| 106: | | | | | | | | | | | | |
| Ascalon, dry | 0-4 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 95-100 | 90-100 | 60-75 | 30-40 | 25-30 | 5-10 |
| | 4-15 | Sandy clay loam | CL, SC, SC-SM | A-4 | 0 | 0 | 95-100 | 95-100 | 75-90 | 35-55 | 25-30 | 5-10 |
| | 15-60 | Fine sandy loam | CL-ML, CL, SC, SC-SM | A-4 | 0 | 0 | 95-100 | 95-100 | 65-95 | 40-70 | 25-30 | 5-10 |
| 107: | | | | | | | | | | | | |
| Ascalon, dry | 0-4 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 95-100 | 90-100 | 60-75 | 30-40 | 25-30 | 5-10 |
| | 4-15 | Sandy clay loam | CL, SC-SM, SC | A-4 | 0 | 0 | 95-100 | 95-100 | 75-90 | 35-55 | 25-30 | 5-10 |
| | 15-60 | Fine sandy loam | CL, SC-SM, CL-ML, SC | A-4 | 0 | 0 | 95-100 | 95-100 | 65-95 | 40-70 | 25-30 | 5-10 |
| 108: | | | | | | | | | | | | |
| Ascalon, dry | 0-4 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 95-100 | 90-100 | 60-75 | 30-40 | 25-30 | 5-10 |
| | 4-15 | Sandy clay loam | CL, SC, SC-SM | A-4 | 0 | 0 | 95-100 | 95-100 | 75-90 | 35-55 | 25-30 | 5-10 |
| | 15-60 | Fine sandy loam | CL-ML, SC, CL, SC-SM | A-4 | 0 | 0 | 95-100 | 95-100 | 65-95 | 40-70 | 25-30 | 5-10 |
| 109: | | | | | | | | | | | | |
| Ascalon | 0-4 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 95-100 | 90-100 | 60-75 | 30-40 | 25-30 | 5-10 |
| | 4-15 | Sandy clay loam | CL, SC-SM, SC | A-4 | 0 | 0 | 95-100 | 95-100 | 75-90 | 35-55 | 25-30 | 5-10 |
| | 15-60 | Fine sandy loam | CL-ML, CL, SC, SC-SM | A-4 | 0 | 0 | 95-100 | 95-100 | 65-95 | 40-70 | 25-30 | 5-10 |
| Haxtun | 0-4 | Loamy sand | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 4-17 | Sandy loam | SC, SC-SM | A-2 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 25-30 | 10-15 |
| | 17-44 | Sandy clay loam | CL, SC | A-6 | 0 | 0 | 100 | 95-100 | 80-100 | 35-80 | 30-35 | 10-20 |
| | 44-60 | Silt loam | CL-ML, SC, CL, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-95 | 30-75 | 25-30 | 5-10 |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 110: | | | | | | | | | | | | |
| Ascalon, dry---- | 0-4 | Sandy loam----- | SC, SC-SM | A-2, A-4 | 0 | 0 | 95-100 | 90-100 | 60-75 | 30-40 | 25-30 | 5-10 |
| | 4-15 | Sandy clay loam | CL, SC, SC-SM | A-4 | 0 | 0 | 95-100 | 95-100 | 75-90 | 35-55 | 25-30 | 5-10 |
| | 15-60 | Fine sandy loam | CL-ML, CL, SC, SC-SM | A-4 | 0 | 0 | 95-100 | 95-100 | 65-95 | 40-70 | 25-30 | 5-10 |
| Haxtun, dry----- | 0-4 | Loamy sand----- | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 4-17 | Sandy loam----- | SC, SC-SM | A-2 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 25-30 | 10-15 |
| | 17-44 | Sandy clay loam | CL, SC | A-6 | 0 | 0 | 100 | 95-100 | 80-100 | 35-80 | 30-35 | 10-20 |
| | 44-60 | Silt loam------ | CL, SC-SM, CL-ML, SC | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-95 | 30-75 | 25-30 | 5-10 |
| 111: | | | | | | | | | | | | |
| Bacid----------- | 0-4 | Silt loam------ | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 4-11 | Silty clay loam | ML | A-7 | 0 | 0 | 100 | 100 | 95-100 | 85-95 | 40-50 | 10-20 |
| | 11-21 | Silty clay----- | MH, ML | A-7 | 0 | 0 | 100 | 100 | 95-100 | 85-95 | 45-55 | 15-25 |
| | 21-60 | Silty clay loam | ML | A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 35-45 | 10-15 |
| 112: | | | | | | | | | | | | |
| Bankard, occasionally flooded-------- | 0-5 | Loamy sand----- | SC-SM, SM | A-2 | 0 | 0 | 100 | 100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 5-60 | Loamy sand----- | SM, SP-SM, SW-SM | A-1, A-3, A-2 | 0 | 0 | 85-100 | 80-100 | 40-85 | 5-30 | 20-25 | NP-5 |
| Glenberg, occasionally flooded-------- | 0-3 | Fine sandy loam | SC, CL-ML, SC-SM | A-4 | 0 | 0 | 100 | 95-100 | 70-80 | 40-55 | 25-30 | 5-10 |
| | 3-32 | Fine sandy loam | SC, CL-ML, SC-SM | A-2, A-4 | 0 | 0 | 95-100 | 90-100 | 55-85 | 30-55 | 25-30 | 5-10 |
| | 32-60 | Loamy sand----- | SM, SP-SM | A-1, A-3, A-2 | 0 | 0 | 85-100 | 80-100 | 40-75 | 5-30 | 0-0 | NP |
| 113: | | | | | | | | | | | | |
| Bijou----------- | 0-4 | Loamy sand----- | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 4-9 | Loamy sand----- | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 9-36 | Sandy loam----- | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 36-60 | Loamy sand----- | SM, SC-SM, SP-SM, SW-SM | A-2, A-3 | 0 | 0 | 100 | 95-100 | 50-75 | 5-30 | 20-25 | NP-5 |
| 114: | | | | | | | | | | | | |
| Bijou, moist---- | 0-4 | Loamy sand----- | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 4-9 | Loamy sand----- | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 9-36 | Sandy loam----- | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 36-60 | Loamy sand----- | SM, SC-SM, SP-SM, SW-SM | A-2, A-3 | 0 | 0 | 100 | 95-100 | 50-75 | 5-30 | 20-25 | NP-5 |
| 115: | | | | | | | | | | | | |
| Bijou, moist---- | 0-4 | Loamy sand----- | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 4-9 | Loamy sand----- | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 9-36 | Sandy loam----- | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 36-60 | Loamy sand----- | SM, SC-SM, SP-SM, SW-SM | A-2, A-3 | 0 | 0 | 100 | 95-100 | 50-75 | 5-30 | 20-25 | NP-5 |
| 116: | | | | | | | | | | | | |
| Blakeland------- | 0-12 | Loamy sand----- | SM | A-2 | 0 | 0 | 95-100 | 90-100 | 50-75 | 15-30 | 0-0 | NP |
| | 12-60 | Loamy sand----- | SM, SP-SM, SW-SM | A-2, A-1, A-3 | 0 | 0 | 95-100 | 80-100 | 35-60 | 5-25 | --- | NP |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 117: | | | | | | | | | | | | |
| Bresser | 0-3 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 95-100 | 95-100 | 55-70 | 30-40 | 20-25 | NP-5 |
| | 3-13 | Sandy clay loam | CL-ML, SC-SM, SC | A-4 | 0 | 0 | 95-100 | 95-100 | 75-100 | 30-80 | 25-30 | 5-10 |
| | 13-60 | Loamy coarse sand. | SM, SW-SM, SP-SM | A-1, A-2 | 0 | 0 | 85-100 | 80-100 | 35-75 | 10-30 | 20-25 | NP-5 |
| 118: | | | | | | | | | | | | |
| Campo | 0-3 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 3-15 | Silty clay | CH, CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 85-100 | 75-95 | 35-65 | 15-40 |
| | 15-60 | Silt loam | ML | A-4, A-6 | 0 | 0 | 95-100 | 80-100 | 75-100 | 55-95 | 30-45 | 5-15 |
| 119: | | | | | | | | | | | | |
| Canyon | 0-3 | Gravelly loam | CL-ML, CL, GC, GC-GM | A-4 | 0-10 | 0-15 | 60-80 | 55-75 | 50-70 | 35-55 | 25-30 | 5-10 |
| | 3-10 | Loam | CL, CL-ML, SC, GC-GM | A-4 | 0-10 | 0-15 | 60-95 | 55-85 | 50-80 | 35-70 | 25-30 | 5-10 |
| | 10-14 | Gravelly weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Rock outcrop | 0-60 | Unweathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 120: | | | | | | | | | | | | |
| Colby | 0-5 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 5-60 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| 121: | | | | | | | | | | | | |
| Colby | 0-5 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 5-60 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| 122: | | | | | | | | | | | | |
| Colby | 0-5 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 5-60 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| Weld | 0-4 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 4-19 | Silty clay | ML | A-7 | 0 | 0 | 100 | 100 | 95-100 | 85-95 | 45-50 | 15-20 |
| | 19-44 | Silty clay loam | ML | A-4, A-7 | 0 | 0 | 100 | 100 | 95-100 | 85-95 | 30-50 | 5-15 |
| | 44-60 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| 123: | | | | | | | | | | | | |
| Firstview | 0-4 | Loamy sand | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 4-20 | Sandy clay loam | CL-ML, CL, SC, SC-SM | A-4, A-6 | 0 | 0 | 100 | 95-100 | 80-95 | 35-75 | 25-35 | 5-15 |
| | 20-35 | Clay | CL, SC | A-6, A-7 | 0 | 0 | 100 | 95-100 | 80-100 | 35-95 | 30-45 | 10-20 |
| | 35-60 | Loamy sand | ML, CL, SC, SM | A-2, A-7, A-4, A-6 | 0 | 0 | 100 | 95-100 | 50-100 | 15-95 | 20-45 | NP-20 |
| 124: | | | | | | | | | | | | |
| Fort Collins | 0-7 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 7-13 | Clay loam | CL | A-6 | 0 | 0 | 100 | 95-100 | 90-100 | 70-80 | 30-35 | 10-15 |
| | 13-30 | Loam | CL, CL-ML | A-4, A-6 | 0 | 0 | 100 | 95-100 | 85-100 | 60-80 | 25-35 | 5-15 |
| | 30-60 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 85-100 | 60-90 | 25-30 | 5-10 |
| 125: | | | | | | | | | | | | |
| Fort Collins | 0-7 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 7-13 | Clay loam | CL | A-6 | 0 | 0 | 100 | 95-100 | 90-100 | 70-80 | 30-35 | 10-15 |
| | 13-30 | Loam | CL, CL-ML | A-4, A-6 | 0 | 0 | 100 | 95-100 | 85-100 | 60-80 | 25-35 | 5-15 |
| | 30-60 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 85-100 | 60-90 | 25-30 | 5-10 |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 126: | | | | | | | | | | | | |
| Fort Collins---- | 0-7 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 7-13 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 95-100 | 90-100 | 70-80 | 30-35 | 10-15 |
| | 13-30 | Loam---------- | CL, CL-ML | A-4, A-6 | 0 | 0 | 100 | 95-100 | 85-100 | 60-80 | 25-35 | 5-15 |
| | 30-60 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 85-100 | 60-90 | 25-30 | 5-10 |
| Karval---------- | 0-5 | Gravelly loamy sand. | SM, SC-SM, SP-SM, SW-SM | A-1, A-2 | 0-10 | 0-15 | 60-80 | 55-75 | 30-55 | 10-20 | 20-25 | NP-5 |
| | 5-40 | Gravelly coarse sand. | SW | A-1 | 0-10 | 0-15 | 60-80 | 55-75 | 25-40 | 0-5 | 20-25 | NP-5 |
| | 40-60 | Coarse sand---- | SM, SC-SM, SW-SM, SP-SM | A-1 | 0-20 | 0-20 | 85-100 | 80-100 | 35-70 | 5-15 | 20-25 | NP-5 |
| 127: | | | | | | | | | | | | |
| Fort Collins---- | 0-7 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 7-13 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 95-100 | 90-100 | 70-80 | 30-35 | 10-15 |
| | 13-30 | Loam---------- | CL, CL-ML | A-4, A-6 | 0 | 0 | 100 | 95-100 | 85-100 | 60-80 | 25-35 | 5-15 |
| | 30-60 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 85-100 | 60-90 | 25-30 | 5-10 |
| Platner--------- | 0-7 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 80-95 | 55-75 | 25-30 | 5-10 |
| | 7-15 | Clay loam------ | CL | A-6, A-7 | 0 | 0 | 95-100 | 85-100 | 75-100 | 60-95 | 35-50 | 15-25 |
| | 15-40 | Silty clay loam | CL | A-6 | 0 | 0 | 95-100 | 85-100 | 80-100 | 75-95 | 30-40 | 10-20 |
| | 40-60 | Clay loam------ | CL, SC-SM, CL-ML, SC | A-2, A-4 | 0 | 0 | 95-100 | 80-100 | 65-100 | 30-80 | 25-30 | 5-10 |
| 128: | | | | | | | | | | | | |
| Fort Collins---- | 0-7 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 7-13 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 95-100 | 90-100 | 70-80 | 30-35 | 10-15 |
| | 13-30 | Loam---------- | CL, CL-ML | A-4, A-6 | 0 | 0 | 100 | 95-100 | 85-100 | 60-80 | 25-35 | 5-15 |
| | 30-60 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 85-100 | 60-90 | 25-30 | 5-10 |
| Razor, moist---- | 0-2 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 2-21 | Silty clay----- | CH, CL | A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 35-65 | 15-40 |
| | 21-27 | Silty clay----- | CH, CL | A-6, A-7 | 0 | 0 | 90-100 | 85-100 | 85-100 | 70-95 | 35-65 | 15-40 |
| | 27-37 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 129: | | | | | | | | | | | | |
| Fort---------- | 0-2 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 100 | 100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 2-5 | Sandy loam----- | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 5-34 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 85-100 | 60-80 | 30-40 | 10-20 |
| | 34-60 | Silty clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 85-100 | 60-95 | 30-40 | 10-20 |
| 130: | | | | | | | | | | | | |
| Fort---------- | 0-2 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 100 | 100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 2-5 | Sandy loam----- | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 5-34 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 85-100 | 60-80 | 30-40 | 10-20 |
| | 34-60 | Silty clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 85-100 | 60-95 | 30-40 | 10-20 |
| 131: | | | | | | | | | | | | |
| Fort---------- | 0-2 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 100 | 100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 2-5 | Sandy loam----- | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 5-34 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 85-100 | 60-80 | 30-40 | 10-20 |
| | 34-60 | Silty clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 85-100 | 60-95 | 30-40 | 10-20 |
| Karval---------- | 0-5 | Gravelly loamy sand. | SW-SM, SC-SM, SP-SM, SM | A-1, A-2 | 0-10 | 0-15 | 60-80 | 55-75 | 30-55 | 10-20 | 20-25 | NP-5 |
| | 5-40 | Gravelly coarse sand. | SW | A-1 | 0-10 | 0-15 | 60-80 | 55-75 | 25-40 | 0-5 | 20-25 | NP-5 |
| | 40-60 | Sand---------- | SM, SC-SM, SW-SM, SP-SM | A-1 | 0-20 | 0-20 | 85-100 | 80-100 | 35-70 | 5-15 | 20-25 | NP-5 |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 132: | | | | | | | | | | | | |
| Fort | 0-2 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 2-5 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 5-34 | Clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 85-100 | 60-80 | 30-40 | 10-20 |
| | 34-60 | Silty clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 85-100 | 60-95 | 30-40 | 10-20 |
| Razor | 0-2 | Clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 2-21 | Silty clay | CH, CL | A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 35-65 | 15-40 |
| | 21-27 | Silty clay | CH, CL | A-6, A-7 | 0 | 0 | 90-100 | 85-100 | 85-100 | 70-95 | 35-65 | 15-40 |
| | 27-37 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 133: | | | | | | | | | | | | |
| Haversid, rarely flooded | 0-14 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 14-60 | Stratified loam to clay loam. | CL, CL-ML | A-4, A-6 | 0 | 0 | 85-100 | 80-100 | 70-100 | 50-85 | 25-35 | 5-15 |
| 134: | | | | | | | | | | | | |
| Haverson, rarely flooded | 0-5 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 5-15 | Clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 85-100 | 60-80 | 30-35 | 10-15 |
| | 15-60 | Clay loam | CL-ML, CL, SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-100 | 30-80 | 25-30 | 5-10 |
| 135: | | | | | | | | | | | | |
| Haxtun | 0-4 | Loamy sand | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 4-17 | Sandy loam | SC, SC-SM | A-2 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 25-30 | 10-15 |
| | 17-44 | Sandy clay loam | CL, SC | A-6 | 0 | 0 | 100 | 95-100 | 80-100 | 35-80 | 30-35 | 10-20 |
| | 44-60 | Silt loam | CL-ML, CL, SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-95 | 30-75 | 25-30 | 5-10 |
| 136: | | | | | | | | | | | | |
| Haxtun, dry | 0-4 | Loamy sand | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 4-17 | Sandy loam | SC, SC-SM | A-2 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 25-30 | 10-15 |
| | 17-44 | Sandy clay loam | CL, SC | A-6 | 0 | 0 | 100 | 95-100 | 80-100 | 35-80 | 30-35 | 10-20 |
| | 44-60 | Silt loam | CL-ML, CL, SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-95 | 30-75 | 25-30 | 5-10 |
| 137: | | | | | | | | | | | | |
| Haxtun, dry | 0-4 | Loamy sand | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 4-17 | Sandy loam | SC, SC-SM | A-2 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 25-30 | 10-15 |
| | 17-44 | Sandy clay loam | CL, SC | A-6 | 0 | 0 | 100 | 95-100 | 80-100 | 35-80 | 30-35 | 10-20 |
| | 44-60 | Silt loam | CL, CL-ML, SC-SM, SC | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-95 | 30-75 | 25-30 | 5-10 |
| Olney | 0-7 | Loamy sand | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 7-36 | Sandy clay loam | CL-ML, SC, CL, SC-SM | A-4, A-6 | 0 | 0 | 100 | 95-100 | 80-90 | 35-55 | 25-35 | 5-15 |
| | 36-46 | Sandy clay loam | ML, CL, SC-SM, SM | A-2, A-4 | 0 | 0 | 85-100 | 80-100 | 50-90 | 25-55 | 20-30 | NP-10 |
| | 46-60 | Sandy loam | CL, ML, SM, SC-SM | A-1, A-2, A-4 | 0 | 0 | 85-100 | 80-100 | 40-90 | 15-55 | 20-30 | NP-10 |
| 138: | | | | | | | | | | | | |
| Haxtun | 0-4 | Loamy sand | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 4-17 | Sandy loam | SC, SC-SM | A-2 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 25-30 | 10-15 |
| | 17-44 | Sandy clay loam | CL, SC | A-6 | 0 | 0 | 100 | 95-100 | 80-100 | 35-80 | 30-35 | 10-20 |
| | 44-60 | Silt loam | CL-ML, SC, CL, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-95 | 30-75 | 25-30 | 5-10 |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 138: | | | | | | | | | | | | |
| Olnest | 0-8 | Loamy sand | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 8-38 | Sandy clay loam | CL-ML, SC, CL, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-90 | 30-55 | 25-35 | 5-10 |
| | 38-60 | Loam | CL-ML, CL, SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-90 | 30-55 | 25-30 | 5-10 |
| 139: | | | | | | | | | | | | |
| Keith | 0-10 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 10-26 | Silty clay loam | ML | A-6, A-4, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 30-45 | 5-15 |
| | 26-60 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| 140: | | | | | | | | | | | | |
| Keith | 0-10 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 10-26 | Silty clay loam | ML | A-4, A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 30-45 | 5-15 |
| | 26-60 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| 141: | | | | | | | | | | | | |
| Kim | 0-4 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 4-38 | Loam | CL, CL-ML | A-4, A-6 | 0 | 0 | 100 | 100 | 85-100 | 60-85 | 25-35 | 5-15 |
| | 38-60 | Clay loam | CL-ML, CL, SC, SC-SM | A-2-6, A-2-4, A-6, A-4 | 0 | 0 | 85-100 | 80-100 | 50-100 | 25-80 | 25-35 | 5-15 |
| 142: | | | | | | | | | | | | |
| Kim | 0-4 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 4-38 | Loam | CL, CL-ML | A-4, A-6 | 0 | 0 | 100 | 100 | 85-100 | 60-85 | 25-35 | 5-15 |
| | 38-60 | Clay loam | CL-ML, CL, SC, SC-SM | A-2-6, A-6, A-2-4, A-4 | 0 | 0 | 85-100 | 80-100 | 50-100 | 25-80 | 25-35 | 5-15 |
| 143: | | | | | | | | | | | | |
| Kimst | 0-5 | Loam | CL, CL-ML | A-4 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 5-60 | Sandy clay loam | CL, CL-ML | A-4, A-6 | 0 | 0 | 90-100 | 90-100 | 85-100 | 60-80 | 25-35 | 5-15 |
| 144: | | | | | | | | | | | | |
| Kimst | 0-5 | Loam | CL, CL-ML | A-4 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 5-60 | Sandy clay loam | CL, CL-ML | A-4, A-6 | 0 | 0 | 90-100 | 90-100 | 85-100 | 60-80 | 25-35 | 5-15 |
| 145: | | | | | | | | | | | | |
| Las Animas, occasionally flooded | 0-6 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 6-10 | Stratified loamy sand to sandy loam to loam. | ML, CL-ML, SC-SM, SM | A-1, A-2, A-4 | 0 | 0 | 85-100 | 80-100 | 40-95 | 15-75 | 20-25 | NP-5 |
| | 10-60 | Stratified loamy sand to sandy loam to loam. | SM | A-1, A-2, A-4 | 0 | 0 | 85-100 | 80-100 | 40-95 | 15-75 | 20-25 | NP-5 |
| 146: | | | | | | | | | | | | |
| Limon, rarely flooded | 0-6 | Clay | CH, CL | A-7 | 0 | 0 | 100 | 100 | 90-100 | 75-95 | 40-65 | 20-40 |
| | 6-60 | Clay | MH, ML | A-7 | 0 | 0 | 100 | 100 | 90-100 | 85-95 | 45-70 | 15-35 |
| 147: | | | | | | | | | | | | |
| Limon, moist, rarely flooded | 0-6 | Clay | CH, CL | A-7 | 0 | 0 | 100 | 100 | 90-100 | 75-95 | 40-65 | 20-40 |
| | 6-60 | Clay | MH, ML | A-7 | 0 | 0 | 100 | 100 | 90-100 | 85-95 | 45-70 | 15-35 |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 148: | | | | | | | | | | | | |
| Manzanola------- | 0-5 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 5-30 | Clay loam------ | CL | A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 35-45 | 15-25 |
| | 30-60 | Clay loam------ | ML | A-6, A-4, A-7 | 0 | 0 | 85-100 | 80-100 | 75-100 | 55-95 | 30-45 | 5-15 |
| 149: | | | | | | | | | | | | |
| Manzanst, rarely flooded-------- | 0-3 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-35 | 10-15 |
| | 3-37 | Clay loam------ | CL | A-6, A-7-6 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 35-50 | 15-25 |
| | 37-60 | Silty clay loam | CL | A-6, A-7-6 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 30-45 | 10-20 |
| 150: | | | | | | | | | | | | |
| Manzanst-------- | 0-8 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-35 | 10-15 |
| | 8-18 | Clay loam------ | CL | A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 18-40 | Silty clay loam | CL | A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 35-50 | 15-25 |
| | 40-60 | Silty clay loam | CL | A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 30-45 | 10-20 |
| 151: | | | | | | | | | | | | |
| Midway---------- | 0-4 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-15 | Clay loam------ | CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 152: | | | | | | | | | | | | |
| Midway, moist--- | 0-4 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-15 | Clay loam------ | CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 153: | | | | | | | | | | | | |
| Midway---------- | 0-4 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-15 | Clay loam------ | CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Razor----------- | 0-2 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 2-21 | Silty clay----- | CH, CL | A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 35-65 | 15-40 |
| | 21-27 | Silty clay----- | CH, CL | A-6, A-7 | 0 | 0 | 90-100 | 85-100 | 85-100 | 70-95 | 35-65 | 15-40 |
| | 27-37 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 154: | | | | | | | | | | | | |
| Midway, moist--- | 0-4 | Clay loam ----- | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-15 | Clay loam------ | CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Razor, moist---- | 0-2 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 2-21 | Silty clay----- | CH, CL | A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 35-65 | 15-40 |
| | 21-27 | Silty clay----- | CH, CL | A-6, A-7 | 0 | 0 | 90-100 | 85-100 | 85-100 | 70-95 | 35-65 | 15-40 |
| | 27-37 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 155: | | | | | | | | | | | | |
| Midway---------- | 0-4 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-15 | Clay loam------ | CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Rock outcrop---- | 0-60 | Unweathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | 0-14 | --- |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 156: | | | | | | | | | | | | |
| Midway, moist--- | 0-4 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-15 | Clay loam------ | CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Rock outcrop, moist---------- | 0-60 | Unweathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | 0-14 | --- |
| 157: | | | | | | | | | | | | |
| Nunn---------- | 0-5 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 95-100 | 85-100 | 65-80 | 30-35 | 10-15 |
| | 5-19 | Clay----------- | CL, SC | A-6, A-7 | 0 | 0 | 100 | 95-100 | 75-100 | 35-95 | 30-45 | 10-20 |
| | 19-60 | Sandy loam----- | SC, CL, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-100 | 30-80 | 25-30 | 5-10 |
| 158: | | | | | | | | | | | | |
| Nunn---------- | 0-5 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 95-100 | 85-100 | 65-80 | 30-35 | 10-15 |
| | 5-19 | Clay----------- | CL, SC | A-6, A-7 | 0 | 0 | 100 | 95-100 | 75-100 | 35-95 | 30-45 | 10-20 |
| | 19-60 | Sandy loam----- | SC, CL, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-100 | 30-80 | 25-30 | 5-10 |
| Sampson, rarely flooded-------- | 0-7 | Loam----------- | CL, CL-ML | A-4 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 7-36 | Clay loam------ | CL, CL-ML | A-4, A-6 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-80 | 25-35 | 5-15 |
| | 36-60 | Loam----------- | CL, CL-ML | A-4 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-80 | 25-30 | 5-10 |
| 159: | | | | | | | | | | | | |
| Nunn, dry------- | 0-5 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 95-100 | 85-100 | 65-80 | 30-35 | 10-15 |
| | 5-19 | Clay----------- | CL, SC | A-6, A-7 | 0 | 0 | 100 | 95-100 | 75-100 | 35-95 | 30-45 | 10-20 |
| | 19-60 | Sandy loam----- | SC, CL, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-100 | 30-80 | 25-30 | 5-10 |
| Sampson, dry, rarely flooded- | 0-7 | Loam----------- | CL, CL-ML | A-4 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 7-36 | Clay loam------ | CL, CL-ML | A-4, A-6 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-80 | 25-35 | 5-15 |
| | 36-60 | Loam----------- | CL, CL-ML | A-4 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-80 | 25-30 | 5-10 |
| 160: | | | | | | | | | | | | |
| Olnest---------- | 0-8 | Loamy sand----- | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 8-38 | Sandy clay loam | CL-ML, CL, SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-90 | 30-55 | 25-35 | 5-10 |
| | 38-60 | Loam----------- | CL-ML, SC, CL, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-90 | 30-55 | 25-30 | 5-10 |
| 161: | | | | | | | | | | | | |
| Olnest---------- | 0-8 | Sandy loam----- | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 8-38 | Sandy clay loam | CL-ML, SC, CL, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-90 | 30-55 | 25-35 | 5-10 |
| | 38-60 | Loam----------- | CL-ML, CL, SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-90 | 30-55 | 25-30 | 5-10 |
| 162: | | | | | | | | | | | | |
| Olnest---------- | 0-8 | Sandy loam----- | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 8-38 | Sandy clay loam | CL-ML, CL, SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-90 | 30-55 | 25-35 | 5-10 |
| | 38-60 | Loam----------- | CL, CL-ML, SC-SM, SC | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-90 | 30-55 | 25-30 | 5-10 |
| 163: | | | | | | | | | | | | |
| Olnest---------- | 0-8 | Sandy loam----- | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 8-38 | Sandy clay loam | CL-ML, CL, SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-90 | 30-55 | 25-35 | 5-10 |
| | 38-60 | Loam----------- | CL, SC-SM, CL-ML, SC | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-90 | 30-55 | 25-30 | 5-10 |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 164: | | | | | | | | | | | | |
| Olney | 0-7 | Loamy sand | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 7-36 | Sandy clay loam | CL-ML, SC, CL, SC-SM | A-4, A-6 | 0 | 0 | 100 | 95-100 | 80-90 | 35-55 | 25-35 | 5-15 |
| | 36-46 | Sandy clay loam | ML, CL, SC-SM, SM | A-2, A-4 | 0 | 0 | 85-100 | 80-100 | 50-90 | 25-55 | 20-30 | NP-10 |
| | 46-60 | Sandy loam | ML, CL, SC-SM, SM | A-1, A-2, A-4 | 0 | 0 | 85-100 | 80-100 | 40-90 | 15-55 | 20-30 | NP-10 |
| 165: | | | | | | | | | | | | |
| Olney | 0-4 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 4-18 | Sandy clay loam | CL-ML, CL, SC, SC-SM | A-4, A-6 | 0 | 0 | 100 | 95-100 | 80-90 | 35-55 | 25-35 | 5-15 |
| | 18-31 | Sandy loam | ML, CL, SC-SM, SM | A-2, A-4 | 0 | 0 | 85-100 | 80-100 | 50-90 | 25-55 | 20-30 | NP-10 |
| | 31-60 | Loamy sand | CL, ML, SM, SC-SM | A-1, A-2, A-4 | 0 | 0 | 85-100 | 80-100 | 40-90 | 15-55 | 20-30 | NP-10 |
| 166: | | | | | | | | | | | | |
| Olney | 0-4 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 4-18 | Sandy clay loam | CL, CL-ML, SC-SM, SC | A-4, A-6 | 0 | 0 | 100 | 95-100 | 80-90 | 35-55 | 25-35 | 5-15 |
| | 18-31 | Sandy loam | ML, CL, SC-SM, SM | A-2, A-4 | 0 | 0 | 85-100 | 80-100 | 50-90 | 25-55 | 20-30 | NP-10 |
| | 31-60 | Loamy sand | CL, ML, SM, SC-SM | A-1, A-4, A-2 | 0 | 0 | 85-100 | 80-100 | 40-90 | 15-55 | 20-30 | NP-10 |
| 167: | | | | | | | | | | | | |
| Olney | 0-4 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 4-18 | Sandy clay loam | CL, CL-ML, SC-SM, SC | A-4, A-6 | 0 | 0 | 100 | 95-100 | 80-90 | 35-55 | 25-35 | 5-15 |
| | 18-31 | Sandy loam | ML, CL, SC-SM, SM | A-2, A-4 | 0 | 0 | 85-100 | 80-100 | 50-90 | 25-55 | 20-30 | NP-10 |
| | 31-60 | Loamy sand | CL, SM, ML, SC-SM | A-1, A-2, A-4 | 0 | 0 | 85-100 | 80-100 | 40-90 | 15-55 | 20-30 | NP-10 |
| 168: | | | | | | | | | | | | |
| Olney | 0-4 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 4-18 | Sandy clay loam | CL-ML, CL, SC, SC-SM | A-4, A-6 | 0 | 0 | 100 | 95-100 | 80-90 | 35-55 | 25-35 | 5-15 |
| | 18-31 | Sandy loam | ML, SC-SM, CL, SM | A-2, A-4 | 0 | 0 | 85-100 | 80-100 | 50-90 | 25-55 | 20-30 | NP-10 |
| | 31-60 | Loamy sand | ML, CL, SC-SM, SM | A-1, A-2, A-4 | 0 | 0 | 85-100 | 80-100 | 40-90 | 15-55 | 20-30 | NP-10 |
| Midway | 0-4 | Clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-15 | Clay loam | CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 169: | | | | | | | | | | | | |
| Otero | 0-13 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 13-60 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 100 | 50-75 | 15-40 | 20-25 | NP-5 |
| 170: | | | | | | | | | | | | |
| Oterodry | 0-11 | Fine sandy loam | SM, ML, SC-SM, CL-ML | A-4 | 0 | 0 | 100 | 100 | 70-85 | 40-55 | 20-25 | NP-5 |
| | 11-60 | Fine sandy loam | ML, CL-ML, SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 55-85 | 30-55 | 20-25 | NP-5 |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 171: | | | | | | | | | | | | |
| Oterodry | 0-11 | Fine sandy loam | SC-SM, SM, CL-ML, ML | A-4 | 0 | 0 | 100 | 100 | 70-85 | 40-55 | 20-25 | NP-5 |
| | 11-60 | Fine sandy loam | ML, SC-SM, CL-ML, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 55-85 | 30-55 | 20-25 | NP-5 |
| 172: | | | | | | | | | | | | |
| Platner | 0-7 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 80-95 | 55-75 | 25-30 | 5-10 |
| | 7-15 | Clay loam | CL | A-6, A-7 | 0 | 0 | 95-100 | 85-100 | 75-100 | 60-95 | 35-50 | 15-25 |
| | 15-40 | Silty clay loam | CL | A-6 | 0 | 0 | 95-100 | 85-100 | 80-100 | 75-95 | 30-40 | 10-20 |
| | 40-60 | Clay loam | CL, SC-SM, CL-ML, SC | A-2, A-4 | 0 | 0 | 95-100 | 80-100 | 65-100 | 30-80 | 25-30 | 5-10 |
| 173: | | | | | | | | | | | | |
| Platner | 0-7 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 80-95 | 55-75 | 25-30 | 5-10 |
| | 7-15 | Clay loam | CL | A-6, A-7 | 0 | 0 | 95-100 | 85-100 | 75-100 | 60-95 | 35-50 | 15-25 |
| | 15-40 | Silty clay loam | CL | A-6 | 0 | 0 | 95-100 | 85-100 | 80-100 | 75-95 | 30-40 | 10-20 |
| | 40-60 | Clay loam | CL-ML, SC, CL, SC-SM | A-2, A-4 | 0 | 0 | 95-100 | 80-100 | 65-100 | 30-80 | 25-30 | 5-10 |
| Ascalon | 0-4 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 95-100 | 90-100 | 60-75 | 30-40 | 25-30 | 5-10 |
| | 4-15 | Sandy clay loam | CL, SC, SC-SM | A-4 | 0 | 0 | 95-100 | 95-100 | 75-90 | 35-55 | 25-30 | 5-10 |
| | 15-60 | Fine sandy loam | CL-ML, CL, SC, SC-SM | A-4 | 0 | 0 | 95-100 | 95-100 | 65-95 | 40-70 | 25-30 | 5-10 |
| 174: | | | | | | | | | | | | |
| Pleasant, rarely ponded | 0-2 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 2-40 | Clay | CH, CL | A-7 | 0 | 0 | 100 | 100 | 90-100 | 75-95 | 40-60 | 15-35 |
| | 40-60 | Silty clay loam | ML | A-6, A-4, A-7 | 0 | 0 | 100 | 100 | 95-100 | 85-95 | 30-50 | 5-20 |
| 175: | | | | | | | | | | | | |
| Rago, rarely flooded | 0-10 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 10-47 | Silty clay | ML | A-7 | 0 | 0 | 95-100 | 95-100 | 95-100 | 85-95 | 45-50 | 15-20 |
| | 47-60 | Silt loam | CL, CL-ML | A-4 | 0 | 0 | 95-100 | 95-100 | 85-100 | 60-90 | 25-30 | 5-10 |
| 176: | | | | | | | | | | | | |
| Rago, dry, rarely flooded | 0-10 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 10-47 | Silty clay | ML | A-7 | 0 | 0 | 95-100 | 95-100 | 95-100 | 85-95 | 45-50 | 15-20 |
| | 47-60 | Silt loam | CL, CL-ML | A-4 | 0 | 0 | 95-100 | 95-100 | 85-100 | 60-90 | 25-30 | 5-10 |
| 177: | | | | | | | | | | | | |
| Razor | 0-2 | Clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 2-15 | Silty clay | CH, CL | A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 35-65 | 15-40 |
| | 15-27 | Silty clay | CH, CL | A-6, A-7 | 0 | 0 | 90-100 | 85-100 | 85-100 | 70-95 | 35-65 | 15-40 |
| | 27-37 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 178: | | | | | | | | | | | | |
| Razor, moist | 0-2 | Clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 2-15 | Silty clay | CH, CL | A-6, A-7 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 35-65 | 15-40 |
| | 15-27 | Silty clay | CH, CL | A-6, A-7 | 0 | 0 | 90-100 | 85-100 | 85-100 | 70-95 | 35-65 | 15-40 |
| | 27-37 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 179: | | | | | | | | | | | | |
| Sampson, rarely flooded | 0-7 | Loam | CL, CL-ML | A-4 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 7-36 | Clay loam | CL, CL-ML | A-4, A-6 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-80 | 25-35 | 5-15 |
| | 36-60 | Loam | CL, CL-ML | A-4 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-80 | 25-30 | 5-10 |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 180: | | | | | | | | | | | | |
| Sampson, dry, rarely flooded- | 0-7 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 7-36 | Clay loam------ | CL, CL-ML | A-4, A-6 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-80 | 25-35 | 5-15 |
| | 36-60 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 95-100 | 95-100 | 85-95 | 60-80 | 25-30 | 5-10 |
| 181: | | | | | | | | | | | | |
| Satanta--------- | 0-4 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 4-19 | Loam---------- | CL, CL-ML | A-4, A-6 | 0 | 0 | 100 | 95-100 | 85-100 | 60-80 | 25-35 | 5-15 |
| | 19-28 | Loam---------- | CL, CL-ML | A-4, A-6 | 0 | 0 | 100 | 95-100 | 85-100 | 60-80 | 25-35 | 5-15 |
| | 28-60 | Loam---------- | CL, ML, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 85-95 | 60-75 | 20-30 | NP-10 |
| 182: | | | | | | | | | | | | |
| Satanta, dry---- | 0-4 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 4-19 | Loam---------- | CL, CL-ML | A-4, A-6 | 0 | 0 | 100 | 95-100 | 85-100 | 60-80 | 25-35 | 5-15 |
| | 19-28 | Loam---------- | CL, CL-ML | A-4, A-6 | 0 | 0 | 100 | 95-100 | 85-100 | 60-80 | 25-35 | 5-15 |
| | 28-60 | Loam---------- | CL-ML, CL, ML | A-4 | 0 | 0 | 100 | 95-100 | 85-95 | 60-75 | 20-30 | NP-10 |
| 183: | | | | | | | | | | | | |
| Seldom, rarely flooded-------- | 0-7 | Sandy loam----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 7-15 | Sandy loam----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 15-42 | Sandy loam----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 42-60 | Stratified sandy loam to sandy clay loam. | ML, CL, SC, SM | A-2, A-4, A-6 | 0 | 0 | 100 | 95-100 | 60-95 | 30-60 | 20-40 | NP-20 |
| 184: | | | | | | | | | | | | |
| Shingle--------- | 0-4 | Silty clay loam | ML | A-4, A-6, A-7 | 0 | 0 | 100 | 95-100 | 95-100 | 85-95 | 30-45 | 5-15 |
| | 4-15 | Silty clay loam | ML | A-4, A-6, A-7 | 0 | 0 | 95-100 | 90-100 | 75-100 | 55-90 | 30-45 | 5-15 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Midway---------- | 0-4 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-15 | Clay loam------ | CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 185: | | | | | | | | | | | | |
| Shingle, moist-- | 0-4 | Silty clay loam | ML | A-4, A-6, A-7 | 0 | 0 | 100 | 95-100 | 95-100 | 85-95 | 30-45 | 5-15 |
| | 4-15 | Silty clay loam | ML | A-4, A-6, A-7 | 0 | 0 | 95-100 | 90-100 | 75-100 | 55-90 | 30-45 | 5-15 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Midway, moist--- | 0-4 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-15 | Clay loam------ | CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 186: | | | | | | | | | | | | |
| Sundance-------- | 0-8 | Loamy sand----- | SM | A-2 | 0 | 0 | 95-100 | 90-100 | 55-80 | 15-30 | 20-25 | NP-5 |
| | 8-17 | Sandy loam----- | CL-ML, CL, SC, SC-SM | A-4 | 0 | 0 | 95-100 | 90-100 | 60-80 | 35-55 | 20-30 | 5-10 |
| | 17-28 | Clay loam------ | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-85 | 25-40 | 10-20 |
| | 28-84 | Silt loam------ | CL, CL-ML | A-4, A-6 | 0 | 0 | 100 | 100 | 90-100 | 85-100 | 25-40 | 5-15 |
| 187: | | | | | | | | | | | | |
| Table Mountain, rarely flooded- | 0-6 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 100 | 100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 6-29 | Clay loam------ | CL, CL-ML | A-4, A-6 | 0 | 0 | 100 | 100 | 85-100 | 60-80 | 25-35 | 5-15 |
| | 29-60 | Loam---------- | CL, CL-ML | A-4 | 0 | 0 | 85-100 | 80-100 | 70-95 | 50-75 | 25-30 | 5-10 |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 188: | | | | | | | | | | | | |
| Travessilla----- | 0-3 | Sandy loam----- | SC, SC-SM | A-2, A-4 | 0-10 | 0-10 | 85-100 | 80-100 | 59-70 | 25-40 | 25-30 | 5-10 |
| | 3-13 | Gravelly sandy loam. | SC, SC-SM | A-2 | 0-10 | 0-10 | 85-100 | 80-100 | 50-70 | 25-40 | 25-30 | 5-10 |
| | 13-23 | Unweathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Rock outcrop---- | 0-60 | Unweathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 189: | | | | | | | | | | | | |
| Truckton-------- | 0-6 | Sandy loam----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 95-100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 6-16 | Sandy loam----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 95-100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 16-60 | Loamy coarse sand. | SC-SM, SM, SP-SM | A-1, A-2 | 0 | 0 | 85-100 | 80-100 | 35-70 | 10-25 | 20-25 | NP-5 |
| 190: | | | | | | | | | | | | |
| Truckton-------- | 0-6 | Sandy loam----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 95-100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 6-16 | Sandy loam----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 95-100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 16-60 | Loamy coarse sand. | SM, SC-SM, SP-SM | A-1, A-2 | 0 | 0 | 85-100 | 80-100 | 35-70 | 10-25 | 20-25 | NP-5 |
| 191: | | | | | | | | | | | | |
| Truckton, dry--- | 0-6 | Sandy loam----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 95-100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 6-16 | Sandy loam----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 95-100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 16-60 | Loamy coarse sand. | SC-SM, SP-SM, SM | A-1, A-2 | 0 | 0 | 85-100 | 80-100 | 35-70 | 10-25 | 20-25 | NP-5 |
| 192: | | | | | | | | | | | | |
| Truckton, dry--- | 0-6 | Sandy loam----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 95-100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 6-16 | Sandy loam----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 95-100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 16-60 | Loamy coarse sand. | SM, SC-SM, SP-SM | A-1, A-2 | 0 | 0 | 85-100 | 80-100 | 35-70 | 10-25 | 20-25 | NP-5 |
| 193: | | | | | | | | | | | | |
| Valent---------- | 0-3 | Sand----------- | SM, SW-SM | A-2, A-3 | 0 | 0 | 100 | 100 | 50-70 | 5-15 | --- | NP |
| | 3-60 | Sand----------- | SM, SP-SM, SW-SM | A-2, A-3 | 0 | 0 | 100 | 100 | 50-75 | 5-30 | --- | NP |
| 194: | | | | | | | | | | | | |
| Valent---------- | 0-3 | Sand----------- | SM, SW-SM | A-2, A-3 | 0 | 0 | 100 | 100 | 50-70 | 5-15 | --- | NP |
| | 3-60 | Sand----------- | SM, SP-SM, SW-SM | A-2, A-3 | 0 | 0 | 100 | 100 | 50-75 | 5-30 | --- | NP |
| Bijou----------- | 0-4 | Loamy sand----- | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 4-9 | Loamy sand----- | SC-SM, SM | A-2 | 0 | 0 | 100 | 95-100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 9-36 | Sandy loam----- | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 36-60 | Loamy sand----- | SM, SC-SM, SP-SM, SW-SM | A-2, A-3 | 0 | 0 | 100 | 95-100 | 50-75 | 5-30 | 20-25 | NP-5 |
| 195: | | | | | | | | | | | | |
| Valent---------- | 0-3 | Sand----------- | SM, SW-SM | A-2, A-3 | 0 | 0 | 100 | 100 | 50-70 | 5-15 | --- | NP |
| | 3-60 | Sand----------- | SM, SP-SM, SW-SM | A-2, A-3 | 0 | 0 | 100 | 100 | 50-75 | 5-30 | --- | NP |
| Vona------------ | 0-7 | Loamy sand----- | SC-SM, SM | A-2 | 0 | 0 | 100 | 100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 7-16 | Sandy loam----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 16-25 | Sandy loam----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 25-60 | Loamy sand----- | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |
| 196: | | | | | | | | | | | | |
| Valent---------- | 0-3 | Sand----------- | SM, SW-SM | A-2, A-3 | 0 | 0 | 100 | 100 | 50-70 | 5-15 | --- | NP |
| | 3-60 | Sand----------- | SM, SP-SM, SW-SM | A-2, A-3 | 0 | 0 | 100 | 100 | 50-75 | 5-30 | --- | NP |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 196: | | | | | | | | | | | | |
| Vonid | 0-6 | Loamy sand | SC-SM, SM | A-2 | 0 | 0 | 100 | 100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 6-34 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 34-52 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 52-60 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |
| 197: | | | | | | | | | | | | |
| Vona | 0-7 | Loamy sand | SC-SM, SM | A-2 | 0 | 0 | 100 | 100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 7-16 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 16-25 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 25-60 | Loamy sand | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |
| 198: | | | | | | | | | | | | |
| Vona | 0-7 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 7-16 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 16-25 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 25-60 | Loamy sand | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |
| 199: | | | | | | | | | | | | |
| Vona | 0-7 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 7-16 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 16-25 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 25-60 | Loamy sand | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |
| 200: | | | | | | | | | | | | |
| Vona | 0-7 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 7-16 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 16-25 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 25-60 | Loamy sand | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |
| Karval | 0-5 | Gravelly loamy sand. | SC-SM, SW-SM, SP-SM, SM | A-1, A-2 | 0-10 | 0-15 | 60-80 | 55-75 | 30-55 | 10-20 | 20-25 | NP-5 |
| | 5-40 | Gravelly coarse sand. | SW | A-1 | 0-10 | 0-15 | 60-80 | 55-75 | 25-40 | 0-5 | 20-25 | NP-5 |
| | 40-60 | Sand | SC-SM, SM, SP-SM, SW-SM | A-1 | 0-20 | 0-20 | 85-100 | 80-100 | 35-70 | 5-15 | 20-25 | NP-5 |
| Midway, moist | 0-4 | Clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-15 | Clay loam | CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 201: | | | | | | | | | | | | |
| Vona | 0-7 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 7-16 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 16-25 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 25-60 | Loamy sand | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |
| Midway, moist | 0-4 | Clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-15 | Clay loam | CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 202: | | | | | | | | | | | | |
| Vona | 0-7 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 7-16 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 16-25 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 25-60 | Loamy sand | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 202: | | | | | | | | | | | | |
| Seldom | 0-7 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 7-15 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 15-42 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 42-60 | Stratified sandy loam to sandy clay loam. | CL, ML, SM, SC | A-4, A-2, A-6 | 0 | 0 | 100 | 95-100 | 60-95 | 30-60 | 20-40 | NP-20 |
| 203: | | | | | | | | | | | | |
| Vonid | 0-6 | Loamy sand | SC-SM, SM | A-2 | 0 | 0 | 100 | 100 | 50-75 | 15-30 | 20-25 | NP-5 |
| | 6-34 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 34-52 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 52-60 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |
| 204: | | | | | | | | | | | | |
| Vonid | 0-6 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 6-34 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 34-52 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 52-60 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |
| 205: | | | | | | | | | | | | |
| Vonid | 0-6 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 6-34 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 34-52 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 52-60 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |
| 206: | | | | | | | | | | | | |
| Vonid | 0-6 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 6-34 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 34-52 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 52-60 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |
| Karval | 0-5 | Gravelly loamy sand. | SC-SM, SW-SM, SP-SM, SM | A-1, A-2 | 0-10 | 0-15 | 60-80 | 55-75 | 30-55 | 10-20 | 20-25 | NP-5 |
| | 5-40 | Gravelly coarse sand. | SW | A-1 | 0-10 | 0-15 | 60-80 | 55-75 | 25-40 | 0-5 | 20-25 | NP-5 |
| | 40-60 | Sand | SC-SM, SM, SW-SM, SP-SM | A-1 | 0-20 | 0-20 | 85-100 | 80-100 | 35-70 | 5-15 | 20-25 | NP-5 |
| Midway | 0-4 | Clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-15 | Clay loam | CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 207: | | | | | | | | | | | | |
| Vonid | 0-6 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 6-34 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 34-52 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 52-60 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |
| Midway | 0-4 | Clay loam | CL | A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-80 | 30-40 | 10-20 |
| | 4-15 | Clay loam | CL | A-6, A-7 | 0 | 0 | 95-100 | 95-100 | 90-100 | 70-95 | 30-45 | 10-20 |
| | 15-25 | Weathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 208: | | | | | | | | | | | | |
| Vonid | 0-6 | Sandy loam | SC, SC-SM | A-2, A-4 | 0 | 0 | 100 | 100 | 60-70 | 30-40 | 25-30 | 5-10 |
| | 6-34 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 34-52 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 52-60 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 90-100 | 50-75 | 15-40 | 20-25 | NP-5 |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 208: | | | | | | | | | | | | |
| Seldom | 0-7 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 7-15 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 15-42 | Sandy loam | SC-SM, SM | A-2, A-4 | 0 | 0 | 100 | 95-100 | 60-70 | 30-40 | 20-25 | NP-5 |
| | 42-60 | Stratified sandy loam to sandy clay loam. | ML, CL, SC, SM | A-2, A-4, A-6 | 0 | 0 | 100 | 95-100 | 60-95 | 30-60 | 20-40 | NP-20 |
| 209: | | | | | | | | | | | | |
| Wages | 0-5 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 100 | 85-95 | 60-75 | 25-30 | 5-10 |
| | 5-12 | Loam | CL, SC | A-6 | 0 | 0 | 100 | 100 | 80-100 | 35-80 | 30-35 | 10-15 |
| | 12-17 | Loam | CL-ML, CL, SC, SC-SM | A-4 | 0 | 0 | 100 | 100 | 80-100 | 35-80 | 25-30 | 5-10 |
| | 17-60 | Loam | CL, SC, SM, SC-SM | A-2-4, A-4 | 0 | 0 | 100 | 100 | 60-95 | 30-75 | 20-30 | NP-10 |
| 210: | | | | | | | | | | | | |
| Wages | 0-4 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 80-95 | 55-75 | 25-30 | 5-10 |
| | 4-10 | Loam | CL-ML, SC, CL, SC-SM | A-4, A-6 | 0 | 0 | 95-100 | 90-100 | 75-95 | 35-75 | 25-35 | 5-15 |
| | 10-35 | Loam | CL-ML, CL, SC, SC-SM | A-2, A-4, A-6 | 0 | 0 | 95-100 | 80-100 | 50-90 | 30-80 | 25-35 | 5-15 |
| | 35-60 | Loam | CL, CL-ML, SC-SM, SC | A-2, A-4 | 0 | 0-5 | 85-100 | 80-100 | 50-95 | 25-75 | 25-30 | 5-10 |
| 211: | | | | | | | | | | | | |
| Wages, dry | 0-4 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 80-95 | 55-75 | 25-30 | 5-10 |
| | 4-10 | Loam | CL-ML, SC, CL, SC-SM | A-4, A-6 | 0 | 0 | 95-100 | 90-100 | 75-95 | 35-75 | 25-35 | 5-15 |
| | 10-35 | Loam | CL-ML, CL, SC, SC-SM | A-2, A-4, A-6 | 0 | 0 | 95-100 | 80-100 | 50-90 | 30-80 | 25-35 | 5-15 |
| | 35-60 | Loam | CL, CL-ML, SC-SM, SC | A-2, A-4 | 0 | 0-5 | 85-100 | 80-100 | 50-95 | 25-75 | 25-30 | 5-10 |
| 212: | | | | | | | | | | | | |
| Wages | 0-4 | Loam | CL, CL-ML | A-4 | 0 | 0 | 100 | 95-100 | 80-95 | 55-75 | 25-30 | 5-10 |
| | 4-10 | Loam | CL-ML, CL, SC, SC-SM | A-4, A-6 | 0 | 0 | 95-100 | 90-100 | 75-95 | 35-75 | 25-35 | 5-15 |
| | 10-35 | Loam | CL-ML, CL, SC, SC-SM | A-2, A-6, A-4 | 0 | 0 | 95-100 | 80-100 | 50-90 | 30-80 | 25-35 | 5-15 |
| | 35-60 | Loam | CL, CL-ML, SC-SM, SC | A-2, A-4 | 0 | 0-5 | 85-100 | 80-100 | 50-95 | 25-75 | 25-30 | 5-10 |
| Karval | 0-5 | Gravelly loamy sand. | SC-SM, SW-SM, SM, SP-SM | A-1, A-2 | 0-10 | 0-15 | 60-80 | 55-75 | 30-55 | 10-20 | 20-25 | NP-5 |
| | 5-40 | Gravelly coarse sand. | SW | A-1 | 0-10 | 0-35 | 60-80 | 55-75 | 25-40 | 0-5 | 20-25 | NP-5 |
| | 40-60 | Sand | SC-SM, SP-SM, SM, SW-SM | A-1, A-2-4, A-3 | 0-20 | 0-35 | 85-100 | 80-100 | 35-70 | 5-15 | 20-25 | NP-5 |
| 213: | | | | | | | | | | | | |
| Weld | 0-4 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 4-19 | Silty clay | ML | A-7 | 0 | 0 | 100 | 100 | 95-100 | 85-95 | 45-50 | 15-20 |
| | 19-44 | Silty clay loam | ML | A-4, A-7 | 0 | 0 | 100 | 100 | 95-100 | 85-95 | 30-50 | 5-15 |
| | 44-60 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| 214: | | | | | | | | | | | | |
| Weld, dry | 0-4 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 4-19 | Silty clay | ML | A-7 | 0 | 0 | 100 | 100 | 95-100 | 85-95 | 45-50 | 15-20 |
| | 19-44 | Silty clay loam | ML | A-4, A-7 | 0 | 0 | 100 | 100 | 95-100 | 85-95 | 30-50 | 5-15 |
| | 44-60 | Silt loam | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |

Table 17.--Engineering Index Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification | | Fragments | | Percentage passing sieve number-- | | | | Liquid limit | Plasticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | >10 inches | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | Pct | | | | | Pct | |
| 215: | | | | | | | | | | | | |
| Wiley---------- | 0-4 | Silt loam------ | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 4-23 | Silty clay loam | CL, ML | A-4, A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 30-40 | 5-15 |
| | 23-60 | Silt loam------ | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| 216: | | | | | | | | | | | | |
| Wiley---------- | 0-4 | Silt loam------ | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 4-23 | Silty clay loam | CL, ML | A-4, A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 30-40 | 5-15 |
| | 23-60 | Silt loam------ | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| 217: | | | | | | | | | | | | |
| Wilid---------- | 0-3 | Silt loam------ | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| | 3-21 | Silty clay loam | CL, ML | A-4, A-6 | 0 | 0 | 100 | 100 | 90-100 | 70-95 | 30-40 | 5-15 |
| | 21-60 | Silt loam------ | ML | A-4 | 0 | 0 | 100 | 100 | 90-100 | 70-90 | 30-35 | 5-10 |
| 218: | | | | | | | | | | | | |
| Water. | | | | | | | | | | | | |
| 219: | | | | | | | | | | | | |
| Gravel pits----- | 0-5 | Extremely gravelly sand. | GW | A-1 | --- | 0-25 | 10-25 | 5-25 | 0-15 | 0-5 | 0-14 | NP |
| | 5-60 | Extremely gravelly sand. | GW, GP, SP, SW | A-1 | --- | 0-25 | 10-55 | 5-50 | 0-15 | 0-5 | 0-14 | NP |
| 220: | | | | | | | | | | | | |
| Access denied. | | | | | | | | | | | | |

Table 18.--Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer.)

| Map symbol and soil name | Depth | Clay | Moist bulk density | Permeability (Ksat) | Available water capacity | Linear extensibility | Organic matter | Erosion factors | | | Wind erodibility group | Wind erodibility index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | K | Kf | T | | |
| | In | Pct | g/cc | In/hr | In/in | Pct | Pct | | | | | |
| 101: | | | | | | | | | | | | |
| Apishapa, rarely ponded | 0-8 | 27-40 | 1.25-1.40 | 0.20-0.60 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 5 | 4L | 86 |
| | 8-60 | 35-55 | 1.15-1.30 | 0.06-0.20 | 0.14-0.21 | 6.0-8.9 | 0.0-0.5 | .32 | .32 | | | |
| 102: | | | | | | | | | | | | |
| Arvada | 0-4 | 30-40 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 3.0-5.9 | 1.0-2.0 | .20 | .20 | 2 | 4L | 86 |
| | 4-25 | 40-50 | 1.15-1.30 | 0.06-0.60 | 0.14-0.16 | 6.0-8.9 | 0.0-0.5 | .17 | .24 | | | |
| | 25-44 | 40-60 | 1.30-1.45 | 0.06-0.20 | 0.11-0.14 | 6.0-8.9 | 0.0-0.5 | .17 | .17 | | | |
| | 44-60 | 30-45 | 1.15-1.40 | 0.00-0.06 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .28 | .28 | | | |
| 103: | | | | | | | | | | | | |
| Ascalon | 0-4 | 12-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.12 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 5 | 3 | 86 |
| | 4-15 | 20-30 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 15-60 | 15-20 | 1.25-1.50 | 0.60-6.00 | 0.13-0.17 | 0.0-2.9 | 0.0-0.5 | .37 | .37 | | | |
| 104: | | | | | | | | | | | | |
| Ascalon | 0-4 | 12-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.12 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 5 | 3 | 86 |
| | 4-15 | 20-30 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 15-60 | 15-20 | 1.25-1.50 | 0.60-6.00 | 0.13-0.17 | 0.0-2.9 | 0.0-0.5 | .37 | .37 | | | |
| 105: | | | | | | | | | | | | |
| Ascalon | 0-4 | 12-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.12 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 5 | 3 | 86 |
| | 4-15 | 20-30 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 15-60 | 15-20 | 1.25-1.50 | 0.60-6.00 | 0.13-0.17 | 0.0-2.9 | 0.0-0.5 | .37 | .37 | | | |
| 106: | | | | | | | | | | | | |
| Ascalon, dry | 0-4 | 12-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.12 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 5 | 3 | 86 |
| | 4-15 | 20-30 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 15-60 | 15-20 | 1.25-1.50 | 0.60-6.00 | 0.13-0.17 | 0.0-2.9 | 0.0-0.5 | .37 | .37 | | | |
| 107: | | | | | | | | | | | | |
| Ascalon, dry | 0-4 | 12-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.12 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 5 | 3 | 86 |
| | 4-15 | 20-30 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 15-60 | 15-20 | 1.25-1.50 | 0.60-6.00 | 0.13-0.17 | 0.0-2.9 | 0.0-0.5 | .37 | .37 | | | |
| 108: | | | | | | | | | | | | |
| Ascalon, dry | 0-4 | 12-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.12 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 5 | 3 | 86 |
| | 4-15 | 20-30 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 15-60 | 15-20 | 1.25-1.50 | 0.60-6.00 | 0.13-0.17 | 0.0-2.9 | 0.0-0.5 | .37 | .37 | | | |
| 109: | | | | | | | | | | | | |
| Ascalon | 0-4 | 12-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.12 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 5 | 3 | 86 |
| | 4-15 | 20-30 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 15-60 | 15-20 | 1.25-1.50 | 0.60-6.00 | 0.13-0.17 | 0.0-2.9 | 0.0-0.5 | .37 | .37 | | | |
| Haxtun | 0-4 | 3-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 1.0-4.0 | .17 | .17 | 5 | 2 | 134 |
| | 4-17 | 10-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 17-44 | 25-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-1.0 | .24 | .24 | | | |
| | 44-60 | 12-25 | 1.25-1.50 | 0.20-0.60 | 0.10-0.18 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| 110: | | | | | | | | | | | | |
| Ascalon, dry | 0-4 | 12-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.12 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 5 | 3 | 86 |
| | 4-15 | 20-30 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 15-60 | 15-20 | 1.25-1.50 | 0.60-6.00 | 0.13-0.17 | 0.0-2.9 | 0.0-0.5 | .37 | .37 | | | |
| Haxtun, dry | 0-4 | 3-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 1.0-4.0 | .17 | .17 | 5 | 2 | 134 |
| | 4-17 | 10-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 17-44 | 25-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-1.0 | .24 | .24 | | | |
| | 44-60 | 12-25 | 1.25-1.50 | 0.20-0.60 | 0.10-0.18 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |

Table 18.--Physical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Clay | Moist bulk density | Permeability (Ksat) | Available water capacity | Linear extensibility | Organic matter | Erosion factors | | | Wind erodibility group | Wind erodibility index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | K | Kf | T | | |
| | In | Pct | g/cc | In/hr | In/in | Pct | Pct | | | | | |
| 111: | | | | | | | | | | | | |
| Bacid | 0-4 | 15-27 | 1.15-1.20 | 0.60-2.00 | 0.15-0.20 | 0.0-2.9 | 1.0-2.0 | .37 | .37 | 5 | 6 | 48 |
| | 4-11 | 35-40 | 1.15-1.30 | 0.06-0.60 | 0.17-0.21 | 3.0-5.9 | 0.5-1.0 | .32 | .32 | | | |
| | 11-21 | 35-50 | 1.15-1.30 | 0.06-0.60 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .32 | .32 | | | |
| | 21-60 | 20-35 | 1.15-1.30 | 0.20-0.60 | 0.15-0.21 | 3.0-5.9 | 0.0-0.5 | .43 | .43 | | | |
| 112: | | | | | | | | | | | | |
| Bankard, occasionally flooded | 0-5 | 2-10 | 1.35-1.45 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 5 | 2 | 134 |
| | 5-60 | 1-10 | 1.35-1.45 | 6.00-19.99 | 0.05-0.07 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| Glenberg, occasionally flooded | 0-3 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.13-0.15 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 4 | 3 | 86 |
| | 3-32 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 32-60 | 1-8 | 1.45-1.60 | 6.00-19.99 | 0.05-0.07 | 0.0-2.9 | 0.0-0.5 | .24 | .24 | | | |
| 113: | | | | | | | | | | | | |
| Bijou | 0-4 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 4 | 2 | 134 |
| | 4-9 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 9-36 | 12-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 36-60 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.05-0.08 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| 114: | | | | | | | | | | | | |
| Bijou, moist | 0-4 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 4 | 2 | 134 |
| | 4-9 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 9-36 | 12-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 36-60 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.05-0.08 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| 115: | | | | | | | | | | | | |
| Bijou, moist | 0-4 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 4 | 2 | 134 |
| | 4-9 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 9-36 | 12-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 36-60 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.05-0.08 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| 116: | | | | | | | | | | | | |
| Blakeland | 0-12 | 3-8 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 1.0-2.0 | .17 | .17 | 5 | 2 | 134 |
| | 12-60 | 2-5 | 1.45-1.60 | 6.00-19.99 | 0.05-0.08 | 0.0-2.9 | 0.0-0.5 | .24 | .24 | | | |
| 117: | | | | | | | | | | | | |
| Bresser | 0-3 | 8-20 | 1.35-1.45 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 3 | 3 | 86 |
| | 3-13 | 20-30 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 13-60 | 3-10 | 1.45-1.60 | 6.00-19.99 | 0.05-0.07 | 0.0-2.9 | 0.0-0.5 | .15 | .15 | | | |
| 118: | | | | | | | | | | | | |
| Campo | 0-3 | 15-27 | 1.15-1.30 | 0.60-6.00 | 0.15-0.20 | 0.0-2.9 | 1.0-2.0 | .37 | .37 | 5 | 6 | 56 |
| | 3-15 | 35-60 | 1.15-1.30 | 0.20-0.60 | 0.15-0.21 | 6.0-8.9 | 0.5-1.0 | .17 | .17 | | | |
| | 15-60 | 20-35 | 1.15-1.30 | 0.20-0.60 | 0.15-0.19 | 0.0-2.9 | 0.0-0.5 | .37 | .37 | | | |
| 119: | | | | | | | | | | | | |
| Canyon | 0-3 | 12-20 | 1.25-1.40 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .20 | .37 | 2 | 4L | 86 |
| | 3-10 | 16-25 | 1.25-1.40 | 0.20-0.60 | 0.13-0.16 | 0.0-2.9 | 0.5-1.0 | .20 | .37 | | | |
| | 10-14 | --- | --- | 0.20-0.60 | --- | --- | --- | --- | --- | | | |
| Rock outcrop | 0-60 | --- | --- | 0.20-0.60 | --- | --- | --- | --- | --- | - | 8 | 0 |
| 120: | | | | | | | | | | | | |
| Colby | 0-5 | 15-27 | 1.15-1.30 | 0.60-6.00 | 0.15-0.20 | 0.0-2.9 | 0.5-2.0 | .43 | .43 | 5 | 4L | 86 |
| | 5-60 | 18-27 | 1.15-1.30 | 0.60-2.00 | 0.15-0.20 | 0.0-2.9 | 0.0-0.5 | .49 | .49 | | | |

Table 18.--Physical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Clay | Moist bulk density | Permeability (Ksat) | Available water capacity | Linear extensibility | Organic matter | Erosion factors | | | Wind erodibility group | Wind erodibility index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | K | Kf | T | | |
| | In | Pct | g/cc | In/hr | In/in | Pct | Pct | | | | | |
| 121: | | | | | | | | | | | | |
| Colby | 0-5 | 15-27 | 1.15-1.30 | 0.60-6.00 | 0.15-0.20 | 0.0-2.9 | 0.5-2.0 | .43 | .43 | 5 | 4L | 86 |
| | 5-60 | 18-27 | 1.15-1.30 | 0.60-2.00 | 0.15-0.20 | 0.0-2.9 | 0.0-0.5 | .49 | .49 | | | |
| 122: | | | | | | | | | | | | |
| Colby | 0-5 | 15-27 | 1.15-1.30 | 0.60-6.00 | 0.15-0.20 | 0.0-2.9 | 0.5-2.0 | .43 | .43 | 5 | 4L | 86 |
| | 5-60 | 18-27 | 1.15-1.30 | 0.60-2.00 | 0.15-0.20 | 0.0-2.9 | 0.0-0.5 | .49 | .49 | | | |
| Weld | 0-4 | 19-25 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 1.0-3.0 | .37 | .37 | 5 | 6 | 48 |
| | 4-19 | 35-45 | 1.15-1.30 | 0.20-0.60 | 0.14-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | | | |
| | 19-44 | 28-39 | 1.15-1.30 | 0.20-0.60 | 0.17-0.21 | 0.0-2.9 | 0.5-2.0 | .32 | .32 | | | |
| | 44-60 | 16-27 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 0.0-0.5 | .49 | .49 | | | |
| 123: | | | | | | | | | | | | |
| Firstview | 0-4 | 5-10 | 1.45-1.60 | 2.00-6.00 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 2 | 2 | 134 |
| | 4-20 | 20-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 20-35 | 30-45 | 1.15-1.40 | 0.06-0.20 | 0.14-0.18 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 35-60 | 5-45 | 1.15-1.60 | 0.20-0.60 | 0.06-0.16 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| 124: | | | | | | | | | | | | |
| Fort Collins | 0-7 | 12-22 | 1.25-1.40 | 0.60-6.00 | 0.14-0.18 | 0.0-2.9 | 1.0-2.0 | .28 | .28 | 5 | 5 | 56 |
| | 7-13 | 28-35 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 0.0-2.9 | 0.5-1.0 | .24 | .24 | | | |
| | 13-30 | 18-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-1.0 | .37 | .37 | | | |
| | 30-60 | 12-25 | 1.25-1.30 | 0.60-6.00 | 0.14-0.20 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| 125: | | | | | | | | | | | | |
| Fort Collins | 0-7 | 12-22 | 1.25-1.40 | 0.60-6.00 | 0.14-0.18 | 0.0-2.9 | 1.0-2.0 | .28 | .28 | 5 | 5 | 56 |
| | 7-13 | 28-35 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 0.0-2.9 | 0.5-1.0 | .24 | .24 | | | |
| | 13-30 | 18-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-1.0 | .37 | .37 | | | |
| | 30-60 | 12-25 | 1.25-1.30 | 0.60-6.00 | 0.14-0.20 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| 126: | | | | | | | | | | | | |
| Fort Collins | 0-7 | 12-22 | 1.25-1.40 | 0.60-6.00 | 0.14-0.18 | 0.0-2.9 | 1.0-2.0 | .28 | .28 | 5 | 5 | 56 |
| | 7-13 | 28-35 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 0.0-2.9 | 0.5-1.0 | .24 | .24 | | | |
| | 13-30 | 18-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-1.0 | .37 | .37 | | | |
| | 30-60 | 12-25 | 1.25-1.30 | 0.60-6.00 | 0.14-0.20 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| Karval | 0-5 | 3-12 | 1.45-1.60 | 6.00-19.99 | 0.04-0.06 | 0.0-2.9 | 0.5-2.0 | .10 | .20 | 5 | 2 | 134 |
| | 5-40 | 3-10 | 1.45-1.60 | 19.99-99.62 | 0.02-0.05 | 0.0-2.9 | 0.0-0.5 | .05 | .10 | | | |
| | 40-60 | 3-10 | 1.45-1.60 | 19.99-99.62 | 0.03-0.07 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| 127: | | | | | | | | | | | | |
| Fort Collins | 0-7 | 12-22 | 1.25-1.40 | 0.60-6.00 | 0.14-0.18 | 0.0-2.9 | 1.0-2.0 | .28 | .28 | 5 | 5 | 56 |
| | 7-13 | 28-35 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 0.0-2.9 | 0.5-1.0 | .24 | .24 | | | |
| | 13-30 | 18-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-1.0 | .37 | .37 | | | |
| | 30-60 | 12-25 | 1.25-1.30 | 0.60-6.00 | 0.14-0.20 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| Platner | 0-7 | 16-25 | 1.25-1.40 | 0.20-0.60 | 0.14-0.18 | 0.0-2.9 | 1.0-3.0 | .28 | .28 | 3 | 6 | 48 |
| | 7-15 | 35-50 | 1.15-1.40 | 0.20-0.60 | 0.13-0.19 | 6.0-8.9 | 0.5-2.0 | .17 | .17 | | | |
| | 15-40 | 30-40 | 1.15-1.40 | 0.20-0.60 | 0.16-0.19 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | | | |
| | 40-60 | 20-30 | 1.25-1.40 | 0.20-0.60 | 0.13-0.19 | 0.0-2.9 | 0.0-0.5 | .28 | .28 | | | |
| 128: | | | | | | | | | | | | |
| Fort Collins | 0-7 | 12-22 | 1.25-1.40 | 0.60-6.00 | 0.14-0.18 | 0.0-2.9 | 1.0-2.0 | .28 | .28 | 5 | 5 | 56 |
| | 7-13 | 28-35 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 0.0-2.9 | 0.5-1.0 | .24 | .24 | | | |
| | 13-30 | 18-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-1.0 | .37 | .37 | | | |
| | 30-60 | 12-25 | 1.25-1.30 | 0.60-6.00 | 0.14-0.20 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| Razor, moist | 0-2 | 28-40 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 3.0-5.9 | 1.0-2.0 | .20 | .20 | 3 | 4L | 86 |
| | 2-21 | 35-60 | 1.15-1.30 | 0.06-0.60 | 0.14-0.21 | 6.0-8.9 | 0.5-1.0 | .24 | .24 | | | |
| | 21-27 | 35-60 | 1.15-1.30 | 0.00-0.06 | 0.13-0.16 | 6.0-8.9 | 0.0-0.5 | .28 | .28 | | | |
| | 27-37 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |

Table 18.--Physical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Clay | Moist bulk density | Permeability (Ksat) | Available water capacity | Linear extensibility | Organic matter | Erosion factors | | | Wind erodibility group | Wind erodibility index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | K | Kf | T | | |
| | In | Pct | g/cc | In/hr | In/in | Pct | Pct | | | | | |
| 129: | | | | | | | | | | | | |
| Fort | 0-2 | 12-22 | 1.25-1.40 | 0.60-6.00 | 0.14-0.18 | 0.0-2.9 | 1.0-2.0 | .28 | .28 | 5 | 5 | 56 |
| | 2-5 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 5-34 | 25-40 | 1.25-1.40 | 0.60-2.00 | 0.14-0.21 | 3.0-5.9 | 0.5-1.0 | .32 | .32 | | | |
| | 34-60 | 25-38 | 1.15-1.40 | 0.20-0.60 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .37 | .37 | | | |
| 130: | | | | | | | | | | | | |
| Fort | 0-2 | 12-22 | 1.25-1.40 | 0.60-6.00 | 0.14-0.18 | 0.0-2.9 | 1.0-2.0 | .28 | .28 | 5 | 5 | 56 |
| | 2-5 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 5-34 | 25-40 | 1.25-1.40 | 0.60-2.00 | 0.14-0.21 | 3.0-5.9 | 0.5-1.0 | .32 | .32 | | | |
| | 34-60 | 25-38 | 1.15-1.40 | 0.20-0.60 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .37 | .37 | | | |
| 131: | | | | | | | | | | | | |
| Fort | 0-2 | 12-22 | 1.25-1.40 | 0.60-6.00 | 0.14-0.18 | 0.0-2.9 | 1.0-2.0 | .28 | .28 | 5 | 5 | 56 |
| | 2-5 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 5-34 | 25-40 | 1.25-1.40 | 0.60-2.00 | 0.14-0.21 | 3.0-5.9 | 0.5-1.0 | .32 | .32 | | | |
| | 34-60 | 25-38 | 1.15-1.40 | 0.20-0.60 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .37 | .37 | | | |
| Karval | 0-5 | 3-12 | 1.45-1.60 | 6.00-19.99 | 0.04-0.06 | 0.0-2.9 | 0.5-2.0 | .10 | .20 | 5 | 2 | 134 |
| | 5-40 | 3-10 | 1.45-1.60 | 19.99-99.62 | 0.02-0.05 | 0.0-2.9 | 0.0-0.5 | .05 | .10 | | | |
| | 40-60 | 3-10 | 1.45-1.60 | 19.99-99.62 | 0.03-0.07 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| 132: | | | | | | | | | | | | |
| Fort | 0-2 | 12-22 | 1.25-1.40 | 0.60-6.00 | 0.14-0.18 | 0.0-2.9 | 1.0-2.0 | .28 | .28 | 5 | 5 | 56 |
| | 2-5 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 5-34 | 25-40 | 1.25-1.40 | 0.60-2.00 | 0.14-0.21 | 3.0-5.9 | 0.5-1.0 | .32 | .32 | | | |
| | 34-60 | 25-38 | 1.15-1.40 | 0.20-0.60 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .37 | .37 | | | |
| Razor | 0-2 | 28-40 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 3.0-5.9 | 1.0-2.0 | .20 | .20 | 3 | 4L | 86 |
| | 2-21 | 35-60 | 1.15-1.30 | 0.06-0.60 | 0.14-0.21 | 6.0-8.9 | 0.5-1.0 | .24 | .24 | | | |
| | 21-27 | 35-60 | 1.15-1.30 | 0.00-0.06 | 0.13-0.16 | 6.0-8.9 | 0.0-0.5 | .28 | .28 | | | |
| | 27-37 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| 133: | | | | | | | | | | | | |
| Haversid, rarely flooded | 0-14 | 15-27 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 0.5-2.0 | .43 | .43 | 5 | 4L | 86 |
| | 14-60 | 20-35 | 1.25-1.40 | 0.20-0.60 | 0.12-0.16 | 0.0-2.9 | 0.0-0.5 | .37 | .37 | | | |
| 134: | | | | | | | | | | | | |
| Haverson, rarely flooded | 0-5 | 18-27 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-2.0 | .37 | .37 | 5 | 4L | 86 |
| | 5-15 | 22-35 | 1.25-1.40 | 0.20-0.60 | 0.14-0.21 | 0.0-2.9 | 0.0-0.5 | .37 | .37 | | | |
| | 15-60 | 15-30 | 1.25-1.50 | 0.20-0.60 | 0.10-0.21 | 0.0-2.9 | 0.0-0.5 | .28 | .28 | | | |
| 135: | | | | | | | | | | | | |
| Haxtun | 0-4 | 3-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 1.0-4.0 | .17 | .17 | 5 | 2 | 134 |
| | 4-17 | 10-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 17-44 | 25-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-1.0 | .24 | .24 | | | |
| | 44-60 | 12-25 | 1.25-1.50 | 0.20-0.60 | 0.10-0.18 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| 136: | | | | | | | | | | | | |
| Haxtun, dry | 0-4 | 3-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 1.0-4.0 | .17 | .17 | 5 | 2 | 134 |
| | 4-17 | 10-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 17-44 | 25-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-1.0 | .24 | .24 | | | |
| | 44-60 | 12-25 | 1.25-1.50 | 0.20-0.60 | 0.10-0.18 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| 137: | | | | | | | | | | | | |
| Haxtun, dry | 0-4 | 3-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 1.0-4.0 | .17 | .17 | 5 | 2 | 134 |
| | 4-17 | 10-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 17-44 | 25-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-1.0 | .24 | .24 | | | |
| | 44-60 | 12-25 | 1.25-1.50 | 0.20-0.60 | 0.10-0.18 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |

Table 18.--Physical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Clay | Moist bulk density | Permeability (Ksat) | Available water capacity | Linear extensibility | Organic matter | Erosion factors | | | Wind erodibility group | Wind erodibility index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | K | Kf | T | | |
| | In | Pct | g/cc | In/hr | In/in | Pct | Pct | | | | | |
| 137: | | | | | | | | | | | | |
| Olney | 0-7 | 3-10 | 1.45-1.60 | 2.00-6.00 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 5 | 2 | 134 |
| | 7-36 | 20-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 36-46 | 10-25 | 1.25-1.50 | 2.00-6.00 | 0.09-0.16 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 46-60 | 5-25 | 1.25-1.60 | 6.00-19.99 | 0.05-0.16 | 0.0-2.9 | 0.0-0.5 | .24 | .24 | | | |
| 138: | | | | | | | | | | | | |
| Haxtun | 0-4 | 3-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 1.0-4.0 | .17 | .17 | 5 | 2 | 134 |
| | 4-17 | 10-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 17-44 | 25-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-1.0 | .24 | .24 | | | |
| | 44-60 | 12-25 | 1.25-1.50 | 0.20-0.60 | 0.10-0.18 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| Olnest | 0-8 | 3-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 5 | 2 | 134 |
| | 8-38 | 18-32 | 1.25-1.50 | 0.60-2.00 | 0.10-0.18 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 38-60 | 12-25 | 1.25-1.50 | 0.60-6.00 | 0.10-0.18 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| 139: | | | | | | | | | | | | |
| Keith | 0-10 | 15-25 | 1.15-1.30 | 0.60-2.00 | 0.15-0.20 | 0.0-2.9 | 1.0-3.0 | .37 | .37 | 5 | 5 | 56 |
| | 10-26 | 26-35 | 1.15-1.30 | 0.20-2.00 | 0.15-0.21 | 0.0-2.9 | 0.5-2.0 | .32 | .32 | | | |
| | 26-60 | 15-25 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 0.0-0.5 | .49 | .49 | | | |
| 140: | | | | | | | | | | | | |
| Keith | 0-10 | 15-25 | 1.15-1.30 | 0.60-2.00 | 0.15-0.20 | 0.0-2.9 | 1.0-3.0 | .37 | .37 | 5 | 5 | 56 |
| | 10-26 | 26-35 | 1.15-1.30 | 0.20-2.00 | 0.15-0.21 | 0.0-2.9 | 0.5-2.0 | .32 | .32 | | | |
| | 26-60 | 15-25 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 0.0-0.5 | .49 | .49 | | | |
| 141: | | | | | | | | | | | | |
| Kim | 0-4 | 15-27 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-2.0 | .37 | .37 | 5 | 4L | 86 |
| | 4-38 | 20-35 | 1.25-1.40 | 0.20-0.60 | 0.14-0.20 | 0.0-2.9 | 0.5-1.0 | .32 | .32 | | | |
| | 38-60 | 12-32 | 1.25-1.50 | 0.20-0.60 | 0.09-0.19 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| 142: | | | | | | | | | | | | |
| Kim | 0-4 | 15-27 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-2.0 | .37 | .37 | 5 | 4L | 86 |
| | 4-38 | 20-35 | 1.25-1.40 | 0.20-0.60 | 0.14-0.20 | 0.0-2.9 | 0.5-1.0 | .32 | .32 | | | |
| | 38-60 | 12-32 | 1.25-1.50 | 0.20-0.60 | 0.09-0.19 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| 143: | | | | | | | | | | | | |
| Kimst | 0-5 | 21-27 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-2.0 | .37 | .37 | 5 | 4L | 86 |
| | 5-60 | 20-35 | 1.25-1.40 | 0.20-0.60 | 0.14-0.21 | 0.0-2.9 | 0.0-0.5 | .28 | .28 | | | |
| 144: | | | | | | | | | | | | |
| Kimst | 0-5 | 21-27 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-2.0 | .37 | .37 | 5 | 4L | 86 |
| | 5-60 | 20-35 | 1.25-1.40 | 0.20-0.60 | 0.14-0.21 | 0.0-2.9 | 0.0-0.5 | .28 | .28 | | | |
| 145: | | | | | | | | | | | | |
| Las Animas, occasionally flooded | 0-6 | 10-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.14 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 3 | 3 | 86 |
| | 6-10 | 8-18 | 1.25-1.60 | 2.00-19.99 | 0.06-0.18 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 10-60 | 8-18 | 1.25-1.60 | 2.00-19.99 | 0.06-0.18 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| 146: | | | | | | | | | | | | |
| Limon, rarely flooded | 0-6 | 40-60 | 1.15-1.30 | 0.06-0.20 | 0.14-0.16 | 6.0-8.9 | 0.5-2.0 | .17 | .17 | 5 | 4 | 86 |
| | 6-60 | 35-60 | 1.15-1.30 | 0.00-0.20 | 0.14-0.20 | 6.0-8.9 | 0.0-0.5 | .32 | .32 | | | |
| 147: | | | | | | | | | | | | |
| Limon, moist, rarely flooded | 0-6 | 40-60 | 1.15-1.30 | 0.06-0.20 | 0.14-0.16 | 6.0-8.9 | 0.5-2.0 | .17 | .17 | 5 | 4 | 86 |
| | 6-60 | 35-60 | 1.15-1.30 | 0.00-0.20 | 0.14-0.20 | 6.0-8.9 | 0.0-0.5 | .32 | .32 | | | |
| 148: | | | | | | | | | | | | |
| Manzanola | 0-5 | 27-40 | 1.25-1.40 | 0.20-0.60 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 5 | 4L | 86 |
| | 5-30 | 35-45 | 1.15-1.30 | 0.06-0.60 | 0.14-0.20 | 3.0-5.9 | 0.5-1.0 | .32 | .32 | | | |
| | 30-60 | 20-40 | 1.15-1.30 | 0.20-0.60 | 0.14-0.18 | 3.0-5.9 | 0.0-0.5 | .37 | .37 | | | |

Table 18.--Physical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Clay | Moist bulk density | Permeability (Ksat) | Available water capacity | Linear extensibility | Organic matter | Erosion factors | | | Wind erodibility group | Wind erodibility index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | K | Kf | T | | |
| | In | Pct | g/cc | In/hr | In/in | Pct | Pct | | | | | |
| 149: | | | | | | | | | | | | |
| Manzanst, rarely flooded | 0-3 | 27-35 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 3.0-5.9 | 1.0-2.0 | .20 | .20 | 5 | 4L | 86 |
| | 3-37 | 35-50 | 1.15-1.40 | 0.06-0.60 | 0.14-0.21 | 3.0-5.9 | 0.5-1.0 | .32 | .32 | | | |
| | 37-60 | 30-45 | 1.15-1.40 | 0.00-0.06 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .28 | .28 | | | |
| 150: | | | | | | | | | | | | |
| Manzanst | 0-8 | 27-35 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 0.0-2.9 | 1.0-2.0 | .20 | .20 | 5 | 4L | 86 |
| | 8-18 | 27-45 | 1.15-1.40 | 0.20-0.60 | 0.14-0.21 | 3.0-5.9 | 0.5-1.0 | .20 | .20 | | | |
| | 18-40 | 35-50 | 1.15-1.40 | 0.06-0.60 | 0.14-0.21 | 3.0-5.9 | 0.5-1.0 | .20 | .20 | | | |
| | 40-60 | 30-45 | 1.15-1.40 | 0.00-0.06 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| 151: | | | | | | | | | | | | |
| Midway | 0-4 | 30-40 | 1.25-1.40 | 0.06-0.20 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 2 | 4L | 86 |
| | 4-15 | 35-45 | 1.15-1.40 | 0.00-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 15-25 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| 152: | | | | | | | | | | | | |
| Midway, moist | 0-4 | 30-40 | 1.25-1.40 | 0.06-0.20 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 2 | 4L | 86 |
| | 4-15 | 35-45 | 1.15-1.40 | 0.00-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 15-25 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| 153: | | | | | | | | | | | | |
| Midway | 0-4 | 30-40 | 1.25-1.40 | 0.06-0.20 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 2 | 4L | 86 |
| | 4-15 | 35-45 | 1.15-1.40 | 0.00-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 15-25 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| Razor | 0-2 | 28-40 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 3.0-5.9 | 1.0-2.0 | .20 | .20 | 3 | 4L | 86 |
| | 2-21 | 35-60 | 1.15-1.30 | 0.06-0.60 | 0.14-0.21 | 6.0-8.9 | 0.5-1.0 | .24 | .24 | | | |
| | 21-27 | 35-60 | 1.15-1.30 | 0.00-0.06 | 0.13-0.16 | 6.0-8.9 | 0.0-0.5 | .28 | .28 | | | |
| | 27-37 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| 154: | | | | | | | | | | | | |
| Midway, moist | 0-4 | 30-40 | 1.25-1.40 | 0.06-0.20 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 2 | 4L | 86 |
| | 4-15 | 35-45 | 1.15-1.40 | 0.00-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 15-25 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| Razor, moist | 0-2 | 28-40 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 3.0-5.9 | 1.0-2.0 | .20 | .20 | 3 | 4L | 86 |
| | 2-21 | 35-60 | 1.15-1.30 | 0.06-0.60 | 0.14-0.21 | 6.0-8.9 | 0.5-1.0 | .24 | .24 | | | |
| | 21-27 | 35-60 | 1.15-1.30 | 0.00-0.06 | 0.13-0.16 | 6.0-8.9 | 0.0-0.5 | .28 | .28 | | | |
| | 27-37 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| 155: | | | | | | | | | | | | |
| Midway | 0-4 | 30-40 | 1.25-1.40 | 0.06-0.20 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 2 | 4L | 86 |
| | 4-15 | 35-45 | 1.15-1.40 | 0.00-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 15-25 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| Rock outcrop | 0-60 | 0-0 | --- | 0.00-0.20 | 0.00-0.00 | --- | --- | --- | --- | - | 8 | 0 |
| 156: | | | | | | | | | | | | |
| Midway, moist | 0-4 | 30-40 | 1.25-1.40 | 0.06-0.20 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 2 | 4L | 86 |
| | 4-15 | 35-45 | 1.15-1.40 | 0.00-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 15-25 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| Rock outcrop, moist | 0-60 | 0-0 | --- | 0.00-0.20 | 0.00-0.00 | --- | --- | --- | --- | - | 8 | 0 |
| 157: | | | | | | | | | | | | |
| Nunn | 0-5 | 28-35 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 0.0-2.9 | 1.0-3.0 | .20 | .20 | 5 | 6 | 48 |
| | 5-19 | 35-50 | 1.15-1.40 | 0.20-0.60 | 0.14-0.21 | 3.0-5.9 | 0.5-2.0 | .20 | .20 | | | |
| | 19-60 | 15-30 | 1.25-1.50 | 0.20-6.00 | 0.10-0.21 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |

Table 18.--Physical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Clay | Moist bulk density | Permeability (Ksat) | Available water capacity | Linear extensibility | Organic matter | Erosion factors | | | Wind erodibility group | Wind erodibility index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | K | Kf | T | | |
| | In | Pct | g/cc | In/hr | In/in | Pct | Pct | | | | | |
| 158: | | | | | | | | | | | | |
| Nunn | 0-5 | 28-35 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 0.0-2.9 | 1.0-3.0 | .20 | .20 | 5 | 6 | 48 |
| | 5-19 | 35-50 | 1.15-1.40 | 0.20-0.60 | 0.14-0.21 | 3.0-5.9 | 0.5-2.0 | .20 | .20 | | | |
| | 19-60 | 15-30 | 1.25-1.50 | 0.20-6.00 | 0.10-0.21 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| Sampson, rarely flooded | 0-7 | 15-27 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 1.0-4.0 | .28 | .28 | 5 | 6 | 48 |
| | 7-36 | 18-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 36-60 | 15-30 | 1.25-1.40 | 0.20-0.60 | 0.14-0.21 | 0.0-2.9 | 0.0-1.0 | .28 | .28 | | | |
| 159: | | | | | | | | | | | | |
| Nunn, dry | 0-5 | 28-35 | 1.25-1.40 | 0.20-2.00 | 0.17-0.21 | 0.0-2.9 | 1.0-3.0 | .20 | .20 | 5 | 6 | 48 |
| | 5-19 | 35-50 | 1.15-1.40 | 0.20-0.60 | 0.14-0.21 | 3.0-5.9 | 0.5-2.0 | .20 | .20 | | | |
| | 19-60 | 15-30 | 1.25-1.50 | 0.20-6.00 | 0.10-0.21 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| Sampson, dry, rarely flooded | 0-7 | 15-27 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 1.0-4.0 | .28 | .28 | 5 | 6 | 48 |
| | 7-36 | 18-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 36-60 | 15-30 | 1.25-1.40 | 0.20-0.60 | 0.14-0.21 | 0.0-2.9 | 0.0-1.0 | .28 | .28 | | | |
| 160: | | | | | | | | | | | | |
| Olnest | 0-8 | 3-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 5 | 2 | 134 |
| | 8-38 | 18-32 | 1.25-1.50 | 0.60-2.00 | 0.10-0.18 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 38-60 | 12-25 | 1.25-1.50 | 0.60-6.00 | 0.10-0.18 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| 161: | | | | | | | | | | | | |
| Olnest | 0-8 | 12-17 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 8-38 | 18-32 | 1.25-1.50 | 0.60-2.00 | 0.10-0.18 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 38-60 | 12-25 | 1.25-1.50 | 0.60-6.00 | 0.10-0.18 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| 162: | | | | | | | | | | | | |
| Olnest | 0-8 | 12-17 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 8-38 | 18-32 | 1.25-1.50 | 0.60-2.00 | 0.10-0.18 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 38-60 | 12-25 | 1.25-1.50 | 0.60-6.00 | 0.10-0.18 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| 163: | | | | | | | | | | | | |
| Olnest | 0-8 | 12-17 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 8-38 | 18-32 | 1.25-1.50 | 0.60-2.00 | 0.10-0.18 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 38-60 | 12-25 | 1.25-1.50 | 0.60-6.00 | 0.10-0.18 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| 164: | | | | | | | | | | | | |
| Olney | 0-7 | 3-10 | 1.45-1.60 | 2.00-6.00 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 5 | 2 | 134 |
| | 7-36 | 20-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 36-46 | 10-25 | 1.25-1.50 | 2.00-6.00 | 0.09-0.16 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 46-60 | 5-25 | 1.25-1.60 | 6.00-19.99 | 0.05-0.16 | 0.0-2.9 | 0.0-0.5 | .24 | .24 | | | |
| 165: | | | | | | | | | | | | |
| Olney | 0-4 | 6-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 4-18 | 20-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 18-31 | 10-25 | 1.25-1.50 | 2.00-6.00 | 0.09-0.16 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 31-60 | 5-25 | 1.25-1.60 | 6.00-19.99 | 0.05-0.16 | 0.0-2.9 | 0.0-0.5 | .24 | .24 | | | |
| 166: | | | | | | | | | | | | |
| Olney | 0-4 | 6-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 4-18 | 20-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 18-31 | 10-25 | 1.25-1.50 | 2.00-6.00 | 0.09-0.16 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 31-60 | 5-25 | 1.25-1.60 | 6.00-19.99 | 0.05-0.16 | 0.0-2.9 | 0.0-0.5 | .24 | .24 | | | |
| 167: | | | | | | | | | | | | |
| Olney | 0-4 | 6-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 4-18 | 20-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 18-31 | 10-25 | 1.25-1.50 | 2.00-6.00 | 0.09-0.16 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 31-60 | 5-25 | 1.25-1.60 | 6.00-19.99 | 0.05-0.16 | 0.0-2.9 | 0.0-0.5 | .24 | .24 | | | |

Table 18.--Physical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Clay | Moist bulk density | Permeability (Ksat) | Available water capacity | Linear extensibility | Organic matter | Erosion factors | | | Wind erodibility group | Wind erodibility index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | K | Kf | T | | |
| | In | Pct | g/cc | In/hr | In/in | Pct | Pct | | | | | |
| 168: | | | | | | | | | | | | |
| Olney | 0-4 | 6-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 4-18 | 20-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 18-31 | 10-25 | 1.25-1.50 | 2.00-6.00 | 0.09-0.16 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 31-60 | 5-25 | 1.25-1.60 | 6.00-19.99 | 0.05-0.16 | 0.0-2.9 | 0.0-0.5 | .24 | .24 | | | |
| Midway | 0-4 | 30-40 | 1.25-1.40 | 0.06-0.20 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 2 | 4L | 86 |
| | 4-15 | 35-45 | 1.15-1.40 | 0.00-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 15-25 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| 169: | | | | | | | | | | | | |
| Otero | 0-13 | 10-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 13-60 | 5-18 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .28 | .28 | | | |
| 170: | | | | | | | | | | | | |
| Oterodry | 0-11 | 5-18 | 1.35-1.50 | 2.00-6.00 | 0.13-0.15 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 11-60 | 5-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.15 | 0.0-2.9 | 0.0-1.0 | .28 | .28 | | | |
| 171: | | | | | | | | | | | | |
| Oterodry | 0-11 | 5-18 | 1.35-1.50 | 2.00-6.00 | 0.13-0.15 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 11-60 | 5-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.15 | 0.0-2.9 | 0.0-1.0 | .28 | .28 | | | |
| 172: | | | | | | | | | | | | |
| Platner | 0-7 | 16-25 | 1.25-1.40 | 0.20-0.60 | 0.14-0.18 | 0.0-2.9 | 1.0-3.0 | .28 | .28 | 3 | 6 | 48 |
| | 7-15 | 35-50 | 1.15-1.40 | 0.20-0.60 | 0.13-0.19 | 3.0-5.9 | 0.5-2.0 | .17 | .17 | | | |
| | 15-40 | 30-40 | 1.15-1.40 | 0.20-0.60 | 0.16-0.19 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | | | |
| | 40-60 | 20-30 | 1.25-1.40 | 0.20-0.60 | 0.13-0.19 | 0.0-2.9 | 0.0-0.5 | .28 | .28 | | | |
| 173: | | | | | | | | | | | | |
| Platner | 0-7 | 16-25 | 1.25-1.40 | 0.20-0.60 | 0.14-0.18 | 0.0-2.9 | 1.0-3.0 | .28 | .28 | 3 | 6 | 48 |
| | 7-15 | 35-50 | 1.15-1.40 | 0.20-0.60 | 0.13-0.19 | 6.0-8.9 | 0.5-2.0 | .17 | .17 | | | |
| | 15-40 | 30-40 | 1.15-1.40 | 0.20-0.60 | 0.16-0.19 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | | | |
| | 40-60 | 20-30 | 1.25-1.40 | 0.20-0.60 | 0.13-0.19 | 0.0-2.9 | 0.0-0.5 | .28 | .28 | | | |
| Ascalon | 0-4 | 12-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.12 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 5 | 3 | 86 |
| | 4-15 | 20-30 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 15-60 | 15-20 | 1.25-1.50 | 0.60-6.00 | 0.13-0.17 | 0.0-2.9 | 0.0-0.5 | .37 | .37 | | | |
| 174: | | | | | | | | | | | | |
| Pleasant, rarely ponded | 0-2 | 20-27 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 1.0-3.0 | .28 | .28 | 5 | 6 | 48 |
| | 2-40 | 37-55 | 1.15-1.30 | 0.20-0.60 | 0.14-0.21 | 6.0-8.9 | 0.5-2.0 | .24 | .24 | | | |
| | 40-60 | 27-45 | 1.15-1.30 | 0.06-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .32 | .32 | | | |
| 175: | | | | | | | | | | | | |
| Rago, rarely flooded | 0-10 | 18-27 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 1.0-4.0 | .37 | .37 | 5 | 6 | 48 |
| | 10-47 | 35-45 | 1.15-1.30 | 0.06-0.60 | 0.14-0.21 | 3.0-5.9 | 1.0-2.0 | .28 | .28 | | | |
| | 47-60 | 15-27 | 1.25-1.30 | 0.20-0.60 | 0.14-0.20 | 0.0-2.9 | 0.0-1.0 | .43 | .43 | | | |
| 176: | | | | | | | | | | | | |
| Rago, dry, rarely flooded | 0-10 | 18-27 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 1.0-4.0 | .37 | .37 | 5 | 6 | 48 |
| | 10-47 | 35-45 | 1.15-1.30 | 0.06-0.60 | 0.14-0.21 | 3.0-5.9 | 1.0-2.0 | .28 | .28 | | | |
| | 47-60 | 15-27 | 1.25-1.30 | 0.20-0.60 | 0.14-0.20 | 0.0-2.9 | 0.0-1.0 | .43 | .43 | | | |
| 177: | | | | | | | | | | | | |
| Razor | 0-2 | 28-40 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 3.0-5.9 | 1.0-2.0 | .20 | .20 | 3 | 4L | 86 |
| | 2-15 | 35-60 | 1.15-1.30 | 0.06-0.60 | 0.14-0.21 | 6.0-8.9 | 0.5-1.0 | .24 | .24 | | | |
| | 15-27 | 35-60 | 1.15-1.30 | 0.00-0.06 | 0.13-0.16 | 6.0-8.9 | 0.0-0.5 | .28 | .28 | | | |
| | 27-37 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |

Table 18.--Physical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Clay | Moist bulk density | Permeability (Ksat) | Available water capacity | Linear extensibility | Organic matter | Erosion factors | | | Wind erodibility group | Wind erodibility index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | K | Kf | T | | |
| | In | Pct | g/cc | In/hr | In/in | Pct | Pct | | | | | |
| 178: | | | | | | | | | | | | |
| Razor, moist---- | 0-2 | 28-40 | 1.25-1.40 | 0.60-2.00 | 0.17-0.21 | 3.0-5.9 | 1.0-2.0 | .20 | .20 | 3 | 4L | 86 |
| | 2-15 | 35-60 | 1.15-1.30 | 0.06-0.60 | 0.14-0.21 | 6.0-8.9 | 0.5-1.0 | .24 | .24 | | | |
| | 15-27 | 35-60 | 1.15-1.30 | 0.00-0.06 | 0.13-0.16 | 6.0-8.9 | 0.0-0.5 | .28 | .28 | | | |
| | 27-37 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| 179: | | | | | | | | | | | | |
| Sampson, rarely flooded-------- | 0-7 | 15-27 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 1.0-4.0 | .28 | .28 | 5 | 6 | 48 |
| | 7-36 | 18-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 36-60 | 15-30 | 1.25-1.40 | 0.20-0.60 | 0.14-0.21 | 0.0-2.9 | 0.0-1.0 | .28 | .28 | | | |
| 180: | | | | | | | | | | | | |
| Sampson, dry, rarely flooded- | 0-7 | 15-27 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 1.0-4.0 | .28 | .28 | 5 | 6 | 48 |
| | 7-36 | 18-35 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 36-60 | 15-30 | 1.25-1.40 | 0.20-0.60 | 0.14-0.21 | 0.0-2.9 | 0.0-1.0 | .28 | .28 | | | |
| 181: | | | | | | | | | | | | |
| Satanta--------- | 0-4 | 15-27 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 1.0-3.0 | .28 | .28 | 5 | 6 | 48 |
| | 4-19 | 18-35 | 1.25-1.40 | 0.60-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | | | |
| | 19-28 | 18-35 | 1.25-1.40 | 0.20-0.60 | 0.14-0.21 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | | | |
| | 28-60 | 8-25 | 1.25-1.40 | 2.00-6.00 | 0.14-0.18 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| 182: | | | | | | | | | | | | |
| Satanta, dry---- | 0-4 | 15-27 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 1.0-3.0 | .28 | .28 | 5 | 6 | 48 |
| | 4-19 | 18-35 | 1.25-1.40 | 0.60-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | | | |
| | 19-28 | 18-35 | 1.25-1.40 | 0.20-0.60 | 0.14-0.21 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | | | |
| | 28-60 | 8-25 | 1.25-1.40 | 2.00-6.00 | 0.14-0.18 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| 183: | | | | | | | | | | | | |
| Seldom, rarely flooded-------- | 0-7 | 8-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-3.0 | .24 | .24 | 5 | 3 | 86 |
| | 7-15 | 8-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 15-42 | 8-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 42-60 | 10-40 | 1.25-1.50 | 0.20-0.60 | 0.10-0.17 | 0.0-2.9 | 0.0-0.5 | .17 | .17 | | | |
| 184: | | | | | | | | | | | | |
| Shingle--------- | 0-4 | 27-35 | 1.15-1.30 | 0.20-0.60 | 0.17-0.21 | 0.0-2.9 | 0.5-2.0 | .32 | .32 | 2 | 4L | 86 |
| | 4-15 | 20-35 | 1.15-1.30 | 0.20-0.60 | 0.15-0.21 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| | 15-25 | --- | --- | 0.00-0.20 | --- | --- | --- | --- | --- | | | |
| Midway---------- | 0-4 | 30-40 | 1.25-1.40 | 0.06-0.20 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 2 | 4L | 86 |
| | 4-15 | 35-45 | 1.15-1.40 | 0.00-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 15-25 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| 185: | | | | | | | | | | | | |
| Shingle, moist-- | 0-4 | 27-35 | 1.15-1.30 | 0.20-0.60 | 0.17-0.21 | 0.0-2.9 | 0.5-2.0 | .32 | .32 | 2 | 4L | 86 |
| | 4-15 | 20-35 | 1.15-1.30 | 0.20-0.60 | 0.15-0.21 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| | 15-25 | --- | --- | 0.00-0.20 | --- | --- | --- | --- | --- | | | |
| Midway, moist--- | 0-4 | 30-40 | 1.25-1.40 | 0.06-0.20 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 2 | 4L | 86 |
| | 4-15 | 35-45 | 1.15-1.40 | 0.00-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 15-25 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| 186: | | | | | | | | | | | | |
| Sundance-------- | 0-8 | 5-10 | 1.50-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | 5 | 2 | 134 |
| | 8-17 | 15-25 | 1.45-1.55 | 0.60-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .24 | .24 | | | |
| | 17-28 | 27-35 | 1.40-1.50 | 0.20-0.60 | 0.16-0.18 | 3.0-5.9 | 0.5-1.0 | .32 | .32 | | | |
| | 28-84 | 10-25 | 1.30-1.40 | 0.60-2.00 | 0.16-0.18 | 3.0-5.9 | 0.0-0.5 | .43 | .43 | | | |

Table 18.--Physical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Clay | Moist bulk density | Permeability (Ksat) | Available water capacity | Linear extensibility | Organic matter | Erosion factors | | | Wind erodibility group | Wind erodibility index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | K | Kf | T | | |
| | In | Pct | g/cc | In/hr | In/in | Pct | Pct | | | | | |
| 187: | | | | | | | | | | | | |
| Table Mountain, rarely flooded- | 0-6 | 15-27 | 1.25-1.40 | 0.60-6.00 | 0.14-0.18 | 0.0-2.9 | 1.0-4.0 | .28 | .28 | 5 | 6 | 48 |
| | 6-29 | 20-35 | 1.25-1.40 | 0.60-2.00 | 0.14-0.21 | 0.0-2.9 | 1.0-2.0 | .28 | .28 | | | |
| | 29-60 | 18-27 | 1.25-1.40 | 0.60-2.00 | 0.13-0.16 | 0.0-2.9 | 0.0-1.0 | .37 | .37 | | | |
| 188: | | | | | | | | | | | | |
| Travessilla----- | 0-3 | 12-18 | 1.35-1.50 | 2.00-6.00 | 0.09-0.12 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 1 | 3 | 86 |
| | 3-13 | 10-20 | 1.35-1.50 | 2.00-6.00 | 0.09-0.12 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 13-23 | --- | --- | 0.20-0.60 | --- | --- | --- | --- | --- | | | |
| Rock outcrop---- | 0-60 | --- | --- | 0.20-0.60 | --- | --- | --- | --- | --- | - | 8 | 0 |
| 189: | | | | | | | | | | | | |
| Truckton-------- | 0-6 | 8-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 3 | 3 | 86 |
| | 6-16 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 16-60 | 2-12 | 1.45-1.60 | 6.00-19.99 | 0.05-0.06 | 0.0-2.9 | 0.0-0.5 | .15 | .15 | | | |
| 190: | | | | | | | | | | | | |
| Truckton-------- | 0-6 | 8-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 3 | 3 | 86 |
| | 6-16 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 16-60 | 2-12 | 1.45-1.60 | 6.00-19.99 | 0.05-0.06 | 0.0-2.9 | 0.0-0.5 | .15 | .15 | | | |
| 191: | | | | | | | | | | | | |
| Truckton, dry--- | 0-6 | 8-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 3 | 3 | 86 |
| | 6-16 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 16-60 | 2-12 | 1.45-1.60 | 6.00-19.99 | 0.05-0.06 | 0.0-2.9 | 0.0-0.5 | .15 | .15 | | | |
| 192: | | | | | | | | | | | | |
| Truckton, dry--- | 0-6 | 8-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | 3 | 3 | 86 |
| | 6-16 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 16-60 | 2-12 | 1.45-1.60 | 6.00-19.99 | 0.05-0.06 | 0.0-2.9 | 0.0-0.5 | .15 | .15 | | | |
| 193: | | | | | | | | | | | | |
| Valent---------- | 0-3 | 1-6 | 1.45-1.60 | 19.99-99.62 | 0.05-0.08 | 0.0-2.9 | 0.5-2.0 | .17 | .17 | 5 | 1 | 220 |
| | 3-60 | 1-8 | 1.45-1.60 | 6.00-19.99 | 0.05-0.08 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| 194: | | | | | | | | | | | | |
| Valent---------- | 0-3 | 1-6 | 1.45-1.60 | 19.99-99.62 | 0.05-0.08 | 0.0-2.9 | 0.5-2.0 | .17 | .17 | 5 | 1 | 220 |
| | 3-60 | 1-8 | 1.45-1.60 | 6.00-19.99 | 0.05-0.08 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| Bijou----------- | 0-4 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 4 | 2 | 134 |
| | 4-9 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-1.0 | .20 | .20 | | | |
| | 9-36 | 12-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 36-60 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.05-0.08 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| 195: | | | | | | | | | | | | |
| Valent---------- | 0-3 | 1-6 | 1.45-1.60 | 19.99-99.62 | 0.05-0.08 | 0.0-2.9 | 0.5-2.0 | .17 | .17 | 5 | 1 | 220 |
| | 3-60 | 1-8 | 1.45-1.60 | 6.00-19.99 | 0.05-0.08 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| Vona------------ | 0-7 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 5 | 2 | 134 |
| | 7-16 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 16-25 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 25-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| 196: | | | | | | | | | | | | |
| Valent---------- | 0-3 | 1-6 | 1.45-1.60 | 19.99-99.62 | 0.05-0.08 | 0.0-2.9 | 0.5-2.0 | .17 | .17 | 5 | 1 | 220 |
| | 3-60 | 1-8 | 1.45-1.60 | 6.00-19.99 | 0.05-0.08 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| Vonid----------- | 0-6 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 5 | 2 | 134 |
| | 6-34 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 34-52 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 52-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |

Table 18.--Physical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Clay | Moist bulk density | Permeability (Ksat) | Available water capacity | Linear extensibility | Organic matter | Erosion factors | | | Wind erodibility group | Wind erodibility index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | K | Kf | T | | |
| | In | Pct | g/cc | In/hr | In/in | Pct | Pct | | | | | |
| 197: | | | | | | | | | | | | |
| Vona | 0-7 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 5 | 2 | 134 |
| | 7-16 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 16-25 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 25-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| 198: | | | | | | | | | | | | |
| Vona | 0-7 | 10-15 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 7-16 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 16-25 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 25-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| 199: | | | | | | | | | | | | |
| Vona | 0-7 | 10-15 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 7-16 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 16-25 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 25-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| 200: | | | | | | | | | | | | |
| Vona | 0-7 | 10-15 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 7-16 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 16-25 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 25-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| Karval | 0-5 | 3-12 | 1.45-1.60 | 6.00-19.99 | 0.04-0.06 | 0.0-2.9 | 0.5-2.0 | .10 | .20 | 5 | 2 | 134 |
| | 5-40 | 3-10 | 1.45-1.60 | 19.99-99.62 | 0.02-0.05 | 0.0-2.9 | 0.0-0.5 | .05 | .10 | | | |
| | 40-60 | 3-10 | 1.45-1.60 | 19.99-99.62 | 0.03-0.07 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| Midway, moist | 0-4 | 30-40 | 1.25-1.40 | 0.06-0.20 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 2 | 4L | 86 |
| | 4-15 | 35-45 | 1.15-1.40 | 0.00-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 15-25 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| 201: | | | | | | | | | | | | |
| Vona | 0-7 | 10-15 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 7-16 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 16-25 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 25-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| Midway, moist | 0-4 | 30-40 | 1.25-1.40 | 0.06-0.20 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 2 | 4L | 86 |
| | 4-15 | 35-45 | 1.15-1.40 | 0.00-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 15-25 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| 202: | | | | | | | | | | | | |
| Vona | 0-7 | 10-15 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 7-16 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 16-25 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 25-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| Seldom | 0-7 | 8-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-3.0 | .24 | .24 | 5 | 3 | 86 |
| | 7-15 | 8-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 15-42 | 8-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 42-60 | 10-40 | 1.25-1.50 | 0.20-0.60 | 0.10-0.17 | 0.0-2.9 | 0.0-0.5 | .17 | .17 | | | |
| 203: | | | | | | | | | | | | |
| Vonid | 0-6 | 4-10 | 1.45-1.60 | 6.00-19.99 | 0.06-0.08 | 0.0-2.9 | 0.5-2.0 | .20 | .20 | 5 | 2 | 134 |
| | 6-34 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 34-52 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 52-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| 204: | | | | | | | | | | | | |
| Vonid | 0-6 | 10-15 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 6-34 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 34-52 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 52-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |

Table 18.--Physical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Clay | Moist bulk density | Permeability (Ksat) | Available water capacity | Linear extensibility | Organic matter | Erosion factors | | | Wind erodibility group | Wind erodibility index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | K | Kf | T | | |
| | In | Pct | g/cc | In/hr | In/in | Pct | Pct | | | | | |
| 205: | | | | | | | | | | | | |
| Vonid | 0-6 | 10-15 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 6-34 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 34-52 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 52-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| 206: | | | | | | | | | | | | |
| Vonid | 0-6 | 10-15 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 6-34 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 34-52 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 52-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| Karval | 0-5 | 3-12 | 1.45-1.60 | 6.00-19.99 | 0.04-0.06 | 0.0-2.9 | 0.5-2.0 | .10 | .20 | 5 | 2 | 134 |
| | 5-40 | 3-10 | 1.45-1.60 | 19.99-99.62 | 0.02-0.05 | 0.0-2.9 | 0.0-0.5 | .05 | .10 | | | |
| | 40-60 | 3-10 | 1.45-1.60 | 19.99-99.62 | 0.03-0.07 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| Midway | 0-4 | 30-40 | 1.25-1.40 | 0.06-0.20 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 2 | 4L | 86 |
| | 4-15 | 35-45 | 1.15-1.40 | 0.00-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 15-25 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| 207: | | | | | | | | | | | | |
| Vonid | 0-6 | 10-15 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 6-34 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 34-52 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 52-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| Midway | 0-4 | 30-40 | 1.25-1.40 | 0.06-0.20 | 0.17-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | 2 | 4L | 86 |
| | 4-15 | 35-45 | 1.15-1.40 | 0.00-0.20 | 0.14-0.21 | 3.0-5.9 | 0.0-0.5 | .24 | .24 | | | |
| | 15-25 | --- | --- | 0.00-0.00 | --- | --- | --- | --- | --- | | | |
| 208: | | | | | | | | | | | | |
| Vonid | 0-6 | 10-15 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-2.0 | .28 | .28 | 5 | 3 | 86 |
| | 6-34 | 10-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 34-52 | 8-18 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| | 52-60 | 5-15 | 1.35-1.60 | 2.00-19.99 | 0.06-0.13 | 0.0-2.9 | 0.0-0.5 | .32 | .32 | | | |
| Seldom | 0-7 | 8-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-3.0 | .24 | .24 | 5 | 3 | 86 |
| | 7-15 | 8-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 15-42 | 8-20 | 1.35-1.50 | 2.00-6.00 | 0.10-0.13 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| | 42-60 | 10-40 | 1.25-1.50 | 0.20-0.60 | 0.10-0.17 | 0.0-2.9 | 0.0-0.5 | .17 | .17 | | | |
| 209: | | | | | | | | | | | | |
| Wages | 0-5 | 18-24 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 1.0-3.0 | .28 | .28 | 5 | 5 | 56 |
| | 5-12 | 25-33 | 1.25-1.40 | 0.60-2.00 | 0.14-0.21 | 0.0-2.9 | 1.0-2.0 | .24 | .24 | | | |
| | 12-17 | 20-30 | 1.25-1.40 | 0.20-2.00 | 0.14-0.21 | 0.0-2.9 | 0.5-1.0 | .24 | .24 | | | |
| | 17-60 | 10-27 | 1.25-1.50 | 0.20-0.60 | 0.10-0.18 | 0.0-2.9 | 0.5-1.0 | .28 | .28 | | | |
| 210: | | | | | | | | | | | | |
| Wages | 0-4 | 15-24 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 2.0-4.0 | .28 | .28 | 5 | 5 | 56 |
| | 4-10 | 20-35 | 1.25-1.40 | 0.60-2.00 | 0.14-0.21 | 0.0-2.9 | 1.0-2.0 | .37 | .37 | | | |
| | 10-35 | 15-35 | 1.25-1.40 | 0.20-2.00 | 0.13-0.19 | 0.0-2.9 | 0.5-1.0 | .37 | .37 | | | |
| | 35-60 | 12-25 | 1.25-1.50 | 0.20-0.60 | 0.09-0.16 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| 211: | | | | | | | | | | | | |
| Wages, dry | 0-4 | 15-24 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 2.0-4.0 | .28 | .28 | 5 | 5 | 56 |
| | 4-10 | 20-35 | 1.25-1.40 | 0.60-2.00 | 0.14-0.21 | 0.0-2.9 | 1.0-2.0 | .37 | .37 | | | |
| | 10-35 | 15-35 | 1.25-1.40 | 0.20-2.00 | 0.13-0.19 | 0.0-2.9 | 0.5-1.0 | .37 | .37 | | | |
| | 35-60 | 12-25 | 1.25-1.50 | 0.20-0.60 | 0.09-0.16 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |

Table 18.--Physical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Clay | Moist bulk density | Permeability (Ksat) | Available water capacity | Linear extensibility | Organic matter | Erosion factors | | | Wind erodibility group | Wind erodibility index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | K | Kf | T | | |
| | In | Pct | g/cc | In/hr | In/in | Pct | Pct | | | | | |
| 212: | | | | | | | | | | | | |
| Wages | 0-4 | 15-24 | 1.25-1.40 | 0.60-2.00 | 0.14-0.18 | 0.0-2.9 | 2.0-4.0 | .28 | .28 | 5 | 5 | 56 |
| | 4-10 | 20-35 | 1.25-1.40 | 0.60-2.00 | 0.14-0.21 | 0.0-2.9 | 1.0-2.0 | .37 | .37 | | | |
| | 10-35 | 15-35 | 1.25-1.40 | 0.20-2.00 | 0.13-0.19 | 0.0-2.9 | 0.5-1.0 | .37 | .37 | | | |
| | 35-60 | 12-25 | 1.25-1.50 | 0.20-0.60 | 0.09-0.16 | 0.0-2.9 | 0.0-0.5 | .43 | .43 | | | |
| Karval | 0-5 | 3-12 | 1.45-1.60 | 6.00-19.99 | 0.04-0.06 | 0.0-2.9 | 0.5-2.0 | .10 | .20 | 5 | 2 | 134 |
| | 5-40 | 3-10 | 1.45-1.60 | 19.99-99.62 | 0.02-0.05 | 0.0-2.9 | 0.0-0.5 | .05 | .10 | | | |
| | 40-60 | 3-10 | 1.45-1.60 | 19.99-99.62 | 0.03-0.07 | 0.0-2.9 | 0.0-0.5 | .20 | .20 | | | |
| 213: | | | | | | | | | | | | |
| Weld | 0-4 | 19-25 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 1.0-3.0 | .37 | .37 | 5 | 6 | 48 |
| | 4-19 | 35-45 | 1.15-1.30 | 0.20-0.60 | 0.14-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | | | |
| | 19-44 | 28-39 | 1.15-1.30 | 0.20-0.60 | 0.17-0.21 | 0.0-2.9 | 0.5-2.0 | .32 | .32 | | | |
| | 44-60 | 16-27 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 0.0-0.5 | .49 | .49 | | | |
| 214: | | | | | | | | | | | | |
| Weld, dry | 0-4 | 19-25 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 1.0-3.0 | .37 | .37 | 5 | 6 | 48 |
| | 4-19 | 35-45 | 1.15-1.30 | 0.20-0.60 | 0.14-0.21 | 3.0-5.9 | 0.5-2.0 | .24 | .24 | | | |
| | 19-44 | 28-39 | 1.15-1.30 | 0.20-0.60 | 0.17-0.21 | 0.0-2.9 | 0.5-2.0 | .32 | .32 | | | |
| | 44-60 | 16-27 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 0.0-0.5 | .49 | .49 | | | |
| 215: | | | | | | | | | | | | |
| Wiley | 0-4 | 15-27 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 1.0-2.0 | .37 | .37 | 5 | 4L | 86 |
| | 4-23 | 18-35 | 1.15-1.30 | 0.60-2.00 | 0.15-0.21 | 3.0-5.9 | 0.5-1.0 | .43 | .43 | | | |
| | 23-60 | 15-27 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 0.0-0.5 | .49 | .49 | | | |
| 216: | | | | | | | | | | | | |
| Wiley | 0-4 | 15-27 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 1.0-2.0 | .37 | .37 | 5 | 4L | 86 |
| | 4-23 | 18-35 | 1.15-1.30 | 0.60-2.00 | 0.15-0.21 | 3.0-5.9 | 0.5-1.0 | .43 | .43 | | | |
| | 23-60 | 15-27 | 1.15-1.30 | 0.20-0.60 | 0.15-0.20 | 0.0-2.9 | 0.0-0.5 | .49 | .49 | | | |
| 217: | | | | | | | | | | | | |
| Wilid | 0-3 | 15-27 | 1.15-1.30 | 0.60-2.00 | 0.15-0.20 | 0.0-2.9 | 1.0-2.0 | .37 | .37 | 5 | 4L | 86 |
| | 3-21 | 18-35 | 1.15-1.30 | 0.60-2.00 | 0.15-0.21 | 3.0-5.9 | 0.5-1.0 | .43 | .43 | | | |
| | 21-60 | 15-27 | 1.15-1.30 | 0.60-6.00 | 0.15-0.20 | 0.0-2.9 | 0.0-0.5 | .49 | .49 | | | |
| 218: | | | | | | | | | | | | |
| Water. | | | | | | | | | | | | |
| 219: | | | | | | | | | | | | |
| Gravel pits | 0-5 | 0-1 | --- | 6.00-19.99 | 0.01-0.02 | 0.0-2.9 | 0.0-0.1 | .02 | --- | - | 8 | 0 |
| | 5-60 | 0-1 | --- | 6.00-19.99 | 0.01-0.02 | 0.0-2.9 | --- | .02 | --- | | | |
| 220: | | | | | | | | | | | | |
| Access denied. | | | | | | | | | | | | |

Table 19.--Chemical Properties of the Soils

(Absence of an entry indicates that the data were not estimated. An entry of zero indicates an estimate of zero.)

| Map symbol and soil name | Depth | Cation-exchange capacity | Soil reaction | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
|---|---|---|---|---|---|---|---|
| | In | meq/100g | pH | Pct | Pct | mmhos/cm | |
| 101: | | | | | | | |
| Apishapa, rarely ponded | 0-8 | 15-35 | 7.4-7.8 | 0-5 | 0-5 | 0.0-4.0 | 0 |
| | 8-60 | 20-45 | 7.4-9.0 | 5-15 | 0-5 | 0.0-8.0 | 0 |
| 102: | | | | | | | |
| Arvada | 0-4 | 20-35 | 7.9-8.4 | 1-5 | 0 | 0.0-2.0 | 0-5 |
| | 4-25 | 25-40 | 7.9-9.0 | 1-5 | 0 | 0.0-8.0 | 15-30 |
| | 25-44 | 20-45 | 7.9-9.0 | 5-15 | 0-3 | 4.0-16.0 | 10-30 |
| | 44-60 | 15-35 | 7.9-9.0 | 1-5 | 0-3 | 2.0-16.0 | 10-30 |
| 103: | | | | | | | |
| Ascalon | 0-4 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-15 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 15-60 | 5.0-15 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |
| 104: | | | | | | | |
| Ascalon | 0-4 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-15 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 15-60 | 5.0-15 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |
| 105: | | | | | | | |
| Ascalon | 0-4 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-15 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 15-60 | 5.0-15 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |
| 106: | | | | | | | |
| Ascalon, dry | 0-4 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-15 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 15-60 | 5.0-15 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |
| 107: | | | | | | | |
| Ascalon, dry | 0-4 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-15 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 15-60 | 5.0-15 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |
| 108: | | | | | | | |
| Ascalon, dry | 0-4 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-15 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 15-60 | 5.0-15 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |
| 109: | | | | | | | |
| Ascalon | 0-4 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-15 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 15-60 | 5.0-15 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |
| Haxtun | 0-4 | 3.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-17 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 17-44 | 10-25 | 7.4-8.4 | 0-15 | 0 | 0.0-2.0 | 0 |
| | 44-60 | 5.0-15 | 7.4-8.4 | 5-15 | 0-2 | 0.0-2.0 | 0 |
| 110: | | | | | | | |
| Ascalon, dry | 0-4 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-15 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 15-60 | 5.0-15 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |
| Haxtun, dry | 0-4 | 3.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-17 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 17-44 | 10-25 | 7.4-8.4 | 0-15 | 0 | 0.0-2.0 | 0 |
| | 44-60 | 5.0-15 | 7.4-8.4 | 5-15 | 0-2 | 0.0-2.0 | 0 |

Table 19.--Chemical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Cation-exchange capacity | Soil reaction | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
|---|---|---|---|---|---|---|---|
| | In | meq/100g | pH | Pct | Pct | mmhos/cm | |
| 111: | | | | | | | |
| Bacid | 0-4 | 10-20 | 7.4-7.8 | 0 | 0 | 0 | 0 |
| | 4-11 | 20-35 | 7.4-8.4 | 0-2 | 0 | 0 | 0 |
| | 11-21 | 20-40 | 7.4-8.4 | 1-5 | 0 | 0 | 0 |
| | 21-60 | 10-30 | 7.9-9.0 | 5-15 | 0-2 | 0 | 0 |
| 112: | | | | | | | |
| Bankard, occasionally flooded | 0-5 | 2.0-10 | 7.4-7.8 | 0-2 | 0 | 0 | 0 |
| | 5-60 | 0.0-5.0 | 7.4-8.4 | 1-5 | 0 | 0.0-2.0 | 0 |
| Glenberg, occasionally flooded | 0-3 | 5.0-15 | 6.6-7.3 | 0-1 | 0 | 0.0-2.0 | 0 |
| | 3-32 | 4.0-10 | 7.9-8.4 | 1-5 | 0 | 0.0-2.0 | 0 |
| | 32-60 | 0.0-5.0 | 7.4-8.4 | 1-5 | 0 | 0.0-2.0 | 0 |
| 113: | | | | | | | |
| Bijou | 0-4 | 3.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-9 | 3.0-10 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 9-36 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 36-60 | 2.0-5.0 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| 114: | | | | | | | |
| Bijou, moist | 0-4 | 3.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-9 | 3.0-10 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 9-36 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 36-60 | 2.0-5.0 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| 115: | | | | | | | |
| Bijou, moist | 0-4 | 3.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-9 | 3.0-10 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 9-36 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 36-60 | 2.0-5.0 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| 116: | | | | | | | |
| Blakeland | 0-12 | 3.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 12-60 | 1.0-5.0 | 6.1-7.8 | 0-5 | 0 | 0 | 0 |
| 117: | | | | | | | |
| Bresser | 0-3 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 3-13 | 10-20 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 13-60 | 1.0-5.0 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| 118: | | | | | | | |
| Campo | 0-3 | 10-25 | 7.4-7.8 | 0 | 0 | 0 | 0 |
| | 3-15 | 20-50 | 6.6-8.4 | 1-10 | 0 | 0 | 0 |
| | 15-60 | 10-30 | 7.9-8.4 | 5-15 | 0-1 | 0 | 0 |
| 119: | | | | | | | |
| Canyon | 0-3 | 5.0-15 | 7.9-8.4 | 0-10 | 0 | 0.0-2.0 | 0 |
| | 3-10 | 5.0-15 | 7.9-8.4 | 1-10 | 0 | 0.0-2.0 | 0 |
| | 10-14 | --- | --- | --- | --- | --- | --- |
| Rock outcrop | 0-60 | --- | --- | --- | --- | --- | --- |
| 120: | | | | | | | |
| Colby | 0-5 | 5.0-20 | 7.9-8.4 | 1-5 | 0 | 0 | 0 |
| | 5-60 | 5.0-15 | 7.4-9.0 | 5-15 | 0 | 0 | 0 |

Table 19.--Chemical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Cation-exchange capacity | Soil reaction | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
|---|---|---|---|---|---|---|---|
| | In | meq/100g | pH | Pct | Pct | mmhos/cm | |
| 121: | | | | | | | |
| Colby | 0-5 | 5.0-20 | 7.9-8.4 | 1-5 | 0 | 0 | 0 |
| | 5-60 | 5.0-15 | 7.4-9.0 | 5-15 | 0 | 0 | 0 |
| 122: | | | | | | | |
| Colby | 0-5 | 5.0-20 | 7.9-8.4 | 1-5 | 0 | 0 | 0 |
| | 5-60 | 5.0-15 | 7.4-9.0 | 5-15 | 0 | 0 | 0 |
| Weld | 0-4 | 15-20 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-19 | 20-40 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 19-44 | 15-30 | 7.4-8.4 | 5-15 | 0 | 0 | 0 |
| | 44-60 | 10-20 | 7.9-9.0 | 5-15 | 0 | 0 | 0 |
| 123: | | | | | | | |
| Firstview | 0-4 | 3.0-10 | 7.9-8.4 | 0 | 0 | 0.0-4.0 | 0-5 |
| | 4-20 | 10-25 | 7.9-9.0 | 0-5 | 0-5 | 2.0-8.0 | 10-20 |
| | 20-35 | 10-25 | 7.9-9.6 | 5-15 | 0-5 | 4.0-16.0 | 15-25 |
| | 35-60 | 1.0-25 | 7.9-9.6 | 5-15 | 0-5 | 4.0-16.0 | 0-10 |
| 124: | | | | | | | |
| Fort Collins | 0-7 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-13 | 10-25 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 13-30 | 5.0-25 | 7.9-9.0 | 0-15 | 0 | 0.0-2.0 | 0 |
| | 30-60 | 4.0-15 | 7.9-9.0 | 5-15 | 0 | 0.0-2.0 | 0 |
| 125: | | | | | | | |
| Fort Collins | 0-7 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-13 | 10-25 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 13-30 | 5.0-25 | 7.9-9.0 | 0-15 | 0 | 0.0-2.0 | 0 |
| | 30-60 | 4.0-15 | 7.9-9.0 | 5-15 | 0 | 0.0-2.0 | 0 |
| 126: | | | | | | | |
| Fort Collins | 0-7 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-13 | 10-25 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 13-30 | 5.0-25 | 7.9-9.0 | 0-15 | 0 | 0.0-2.0 | 0 |
| | 30-60 | 4.0-15 | 7.9-9.0 | 5-15 | 0 | 0.0-2.0 | 0 |
| Karval | 0-5 | 2.0-10 | 5.6-6.0 | 0-2 | 0 | 0 | 0 |
| | 5-40 | 1.0-5.0 | 6.6-8.4 | 2-5 | 0 | 0 | 0 |
| | 40-60 | 1.0-5.0 | 6.6-8.4 | 0-5 | 0 | 0.0-2.0 | 0 |
| 127: | | | | | | | |
| Fort Collins | 0-7 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-13 | 10-25 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 13-30 | 5.0-25 | 7.9-9.0 | 0-15 | 0 | 0.0-2.0 | 0 |
| | 30-60 | 4.0-15 | 7.9-9.0 | 5-15 | 0 | 0.0-2.0 | 0 |
| Platner | 0-7 | 10-20 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-15 | 15-35 | 6.6-7.8 | 0-5 | 0 | 0 | 0 |
| | 15-40 | 20-35 | 7.4-8.4 | 1-15 | 0 | 0.0-2.0 | 0 |
| | 40-60 | 5.0-20 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |
| 128: | | | | | | | |
| Fort Collins | 0-7 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-13 | 10-25 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 13-30 | 5.0-25 | 7.9-9.0 | 0-15 | 0 | 0.0-2.0 | 0 |
| | 30-60 | 4.0-15 | 7.9-9.0 | 5-15 | 0 | 0.0-2.0 | 0 |
| Razor, moist | 0-2 | 20-35 | 7.9-8.4 | 0-5 | 0 | 0.0-2.0 | 0-5 |
| | 2-21 | 20-50 | 7.4-8.4 | 1-10 | 0 | 2.0-8.0 | 0-10 |
| | 21-27 | 20-50 | 7.4-8.4 | 1-15 | 0-5 | 4.0-8.0 | 10-15 |
| | 27-37 | --- | --- | --- | --- | --- | --- |

Table 19.--Chemical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Cation-exchange capacity | Soil reaction | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
|---|---|---|---|---|---|---|---|
| | In | meq/100g | pH | Pct | Pct | mmhos/cm | |
| 129: | | | | | | | |
| Fort | 0-2 | 5.0-15 | 7.4-7.8 | 0 | 0 | 0 | 0 |
| | 2-5 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 5-34 | 10-25 | 7.9-9.0 | 5-15 | 0 | 0.0-4.0 | 0-15 |
| | 34-60 | 10-25 | 7.9-9.0 | 5-15 | --- | 0.0-8.0 | 0-15 |
| 130: | | | | | | | |
| Fort | 0-2 | 5.0-15 | 7.4-7.8 | 0 | 0 | 0 | 0 |
| | 2-5 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 5-34 | 10-25 | 7.9-9.0 | 5-15 | 0 | 0.0-4.0 | 0-15 |
| | 34-60 | 10-25 | 7.9-9.0 | 5-15 | --- | 0.0-8.0 | 0-15 |
| 131: | | | | | | | |
| Fort | 0-2 | 5.0-15 | 7.4-7.8 | 0 | 0 | 0 | 0 |
| | 2-5 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 5-34 | 10-25 | 7.9-9.0 | 5-15 | 0 | 0.0-4.0 | 0-15 |
| | 34-60 | 10-25 | 7.9-9.0 | 5-15 | --- | 0.0-8.0 | 0-15 |
| Karval | 0-5 | 2.0-10 | 5.6-6.0 | 0-2 | 0 | 0 | 0 |
| | 5-40 | 1.0-5.0 | 6.6-8.4 | 2-5 | 0 | 0 | 0 |
| | 40-60 | 1.0-5.0 | 6.6-8.4 | 0-5 | 0 | 0.0-2.0 | 0 |
| 132: | | | | | | | |
| Fort | 0-2 | 5.0-15 | 7.4-7.8 | 0 | 0 | 0 | 0 |
| | 2-5 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 5-34 | 10-25 | 7.9-9.0 | 5-15 | 0 | 0.0-4.0 | 0-15 |
| | 34-60 | 10-25 | 7.9-9.0 | 5-15 | --- | 0.0-8.0 | 0-15 |
| Razor | 0-2 | 20-35 | 7.9-8.4 | 0-5 | 0 | 0.0-2.0 | 0-5 |
| | 2-21 | 20-50 | 7.4-8.4 | 1-10 | 0 | 2.0-8.0 | 0-10 |
| | 21-27 | 20-50 | 7.4-8.4 | 1-15 | 0-5 | 4.0-8.0 | 10-15 |
| | 27-37 | --- | --- | --- | --- | --- | --- |
| 133: | | | | | | | |
| Haversid, rarely flooded | 0-14 | 5.0-20 | 7.9-8.4 | 0-5 | 0 | 0.0-4.0 | 0 |
| | 14-60 | 5.0-20 | 7.9-9.0 | 1-15 | 0-2 | 0.0-8.0 | 0-10 |
| 134: | | | | | | | |
| Haverson, rarely flooded | 0-5 | 10-20 | 7.4-7.8 | 0-5 | 0 | 0 | 0 |
| | 5-15 | 10-20 | 7.9-8.4 | 0-5 | 0 | 0.0-4.0 | 0 |
| | 15-60 | 5.0-20 | 7.9-8.4 | 1-15 | 0-2 | 4.0-8.0 | 0-5 |
| 135: | | | | | | | |
| Haxtun | 0-4 | 3.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-17 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 17-44 | 10-25 | 7.4-8.4 | 0-15 | 0 | 0.0-2.0 | 0 |
| | 44-60 | 5.0-15 | 7.4-8.4 | 5-15 | 0-2 | 0.0-2.0 | 0 |
| 136: | | | | | | | |
| Haxtun, dry | 0-4 | 3.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-17 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 17-44 | 10-25 | 7.4-8.4 | 0-15 | 0 | 0.0-2.0 | 0 |
| | 44-60 | 5.0-15 | 7.4-8.4 | 5-15 | 0-2 | 0.0-2.0 | 0 |
| 137: | | | | | | | |
| Haxtun, dry | 0-4 | 3.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-17 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 17-44 | 10-25 | 7.4-8.4 | 0-15 | 0 | 0.0-2.0 | 0 |
| | 44-60 | 5.0-15 | 7.4-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |

Table 19.--Chemical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Cation-exchange capacity | Soil reaction | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
|---|---|---|---|---|---|---|---|
| | In | meq/100g | pH | Pct | Pct | mmhos/cm | |
| 137: | | | | | | | |
| Olney | 0-7 | 2.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-36 | 10-25 | 6.6-7.8 | 0-10 | 0 | 0 | 0 |
| | 36-46 | 5.0-15 | 6.6-7.8 | 0-10 | 0 | 0 | 0 |
| | 46-60 | 1.0-15 | 7.4-9.0 | 5-15 | 0 | 0 | 0 |
| 138: | | | | | | | |
| Haxtun | 0-4 | 3.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-17 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 17-44 | 10-25 | 7.4-8.4 | 0-15 | 0 | 0.0-2.0 | 0 |
| | 44-60 | 5.0-15 | 7.4-8.4 | 5-15 | 0-2 | 0.0-2.0 | 0 |
| Olnest | 0-8 | 2.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 8-38 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 38-60 | 4.0-15 | 7.9-9.0 | 5-15 | 0 | 0 | 0 |
| 139: | | | | | | | |
| Keith | 0-10 | 10-20 | 7.4-7.8 | 0 | 0 | 0 | 0 |
| | 10-26 | 10-25 | 6.6-7.8 | 0-10 | 0 | 0.0-2.0 | 0 |
| | 26-60 | 5.0-15 | 7.9-8.4 | 3-15 | 0 | 0.0-2.0 | 0 |
| 140: | | | | | | | |
| Keith | 0-10 | 10-20 | 7.4-7.8 | 0 | 0 | 0 | 0 |
| | 10-26 | 10-25 | 6.6-7.8 | 0-10 | 0 | 0.0-2.0 | 0 |
| | 26-60 | 5.0-15 | 7.9-8.4 | 3-15 | 0 | 0.0-2.0 | 0 |
| 141: | | | | | | | |
| Kim | 0-4 | 5.0-20 | 7.9-8.4 | 0-5 | 0 | 0 | 0 |
| | 4-38 | 10-25 | 7.4-8.4 | 1-10 | 0 | 0 | 0 |
| | 38-60 | 4.0-20 | 7.9-9.0 | 1-15 | 0-2 | 0.0-4.0 | 0 |
| 142: | | | | | | | |
| Kim | 0-4 | 5.0-20 | 7.9-8.4 | 0-5 | 0 | 0 | 0 |
| | 4-38 | 10-25 | 7.4-8.4 | 1-10 | 0 | 0 | 0 |
| | 38-60 | 4.0-20 | 7.9-9.0 | 1-15 | 0-2 | 0.0-4.0 | 0 |
| 143: | | | | | | | |
| Kimst | 0-5 | 10-20 | 7.9-8.4 | 5-10 | 0 | 0 | 0 |
| | 5-60 | 5.0-20 | 7.9-8.4 | 5-15 | 0 | 0.0-4.0 | 0 |
| 144: | | | | | | | |
| Kimst | 0-5 | 10-20 | 7.9-8.4 | 5-10 | 0 | 0 | 0 |
| | 5-60 | 5.0-20 | 7.9-8.4 | 5-15 | 0 | 0.0-4.0 | 0 |
| 145: | | | | | | | |
| Las Animas, occasionally flooded | 0-6 | 5.0-15 | 7.9-8.4 | 0-2 | 0-5 | 0.0-4.0 | 0-5 |
| | 6-10 | 2.0-15 | 7.4-9.0 | 1-15 | 0-5 | 2.0-8.0 | 0-5 |
| | 10-60 | 2.0-15 | 7.4-9.0 | 1-15 | 0 | 0.0-2.0 | 0 |
| 146: | | | | | | | |
| Limon, rarely flooded | 0-6 | 25-50 | 8.5-9.0 | 0-2 | 0 | 2.0-8.0 | 0-2 |
| | 6-60 | 20-50 | 7.9-9.0 | 1-10 | 0-5 | 2.0-8.0 | 0-10 |
| 147: | | | | | | | |
| Limon, moist, rarely flooded | 0-6 | 25-50 | 8.5-9.0 | 0-2 | 0 | 2.0-8.0 | 0-2 |
| | 6-60 | 20-50 | 7.9-9.0 | 1-10 | 0-5 | 2.0-8.0 | 0-10 |

Table 19.--Chemical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Cation-exchange capacity | Soil reaction | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
|---|---|---|---|---|---|---|---|
| | In | meq/100g | pH | Pct | Pct | mmhos/cm | |
| 148: | | | | | | | |
| Manzanola------- | 0-5 | 15-35 | 7.4-7.8 | 1-5 | 0 | 0.0-4.0 | 0 |
| | 5-30 | 20-40 | 7.4-8.4 | 1-15 | 0 | 0.0-4.0 | 0 |
| | 30-60 | 5.0-25 | 7.9-9.0 | 4-15 | 0-4 | 2.0-8.0 | 0-5 |
| 149: | | | | | | | |
| Manzanst, rarely flooded-------- | 0-3 | 10-25 | 7.4-8.4 | 0-10 | 0 | 0.0-4.0 | 0-10 |
| | 3-37 | 20-40 | 7.4-8.4 | 5-10 | 0-1 | 0.0-4.0 | 1-10 |
| | 37-60 | 15-35 | 7.9-9.0 | 5-15 | 0-5 | 0.0-2.0 | 1-10 |
| 150: | | | | | | | |
| Manzanst-------- | 0-8 | 15-30 | 7.4-7.8 | 0-10 | 0 | 0.0-4.0 | 0-10 |
| | 8-18 | 15-40 | 7.4-8.4 | 0-10 | 0 | 0.0-4.0 | 0-10 |
| | 18-40 | 20-40 | 7.4-8.4 | 5-10 | 0-1 | 0.0-4.0 | 1-10 |
| | 40-60 | 15-35 | 7.9-9.0 | 5-15 | 0-5 | 0.0-2.0 | 1-10 |
| 151: | | | | | | | |
| Midway---------- | 0-4 | 20-35 | 7.9-8.4 | 0-5 | 0-1 | 2.0-4.0 | 0-5 |
| | 4-15 | 20-35 | 7.4-8.4 | 5-15 | 1-15 | 2.0-8.0 | 1-15 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| 152: | | | | | | | |
| Midway, moist--- | 0-4 | 20-35 | 7.9-8.4 | 0-5 | 0-1 | 2.0-4.0 | 0-5 |
| | 4-15 | 20-35 | 7.4-8.4 | 5-15 | 1-15 | 2.0-8.0 | 1-15 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| 153: | | | | | | | |
| Midway---------- | 0-4 | 20-35 | 7.9-8.4 | 0-5 | 0-1 | 2.0-4.0 | 0-5 |
| | 4-15 | 20-35 | 7.4-8.4 | 5-15 | 1-15 | 2.0-8.0 | 1-15 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| Razor----------- | 0-2 | 20-35 | 7.9-8.4 | 0-5 | 0 | 0.0-2.0 | 0-5 |
| | 2-21 | 20-50 | 7.4-8.4 | 1-10 | 0 | 2.0-8.0 | 0-10 |
| | 21-27 | 20-50 | 7.4-8.4 | 1-15 | 0-5 | 4.0-8.0 | 10-15 |
| | 27-37 | --- | --- | --- | --- | --- | --- |
| 154: | | | | | | | |
| Midway, moist--- | 0-4 | 20-35 | 7.9-8.4 | 0-5 | 0-1 | 2.0-4.0 | 0-5 |
| | 4-15 | 20-35 | 7.4-8.4 | 5-15 | 1-15 | 2.0-8.0 | 1-15 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| Razor, moist---- | 0-2 | 20-35 | 7.9-8.4 | 0-5 | 0 | 0.0-2.0 | 0-5 |
| | 2-21 | 20-50 | 7.4-8.4 | 1-10 | 0 | 2.0-8.0 | 0-10 |
| | 21-27 | 20-50 | 7.4-8.4 | 1-15 | 0-5 | 4.0-8.0 | 10-15 |
| | 27-37 | --- | --- | --- | --- | --- | --- |
| 155: | | | | | | | |
| Midway---------- | 0-4 | 20-35 | 7.9-8.4 | 0-5 | 0-1 | 2.0-4.0 | 0-5 |
| | 4-15 | 20-35 | 7.4-8.4 | 5-15 | 1-15 | 2.0-8.0 | 1-15 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| Rock outcrop---- | 0-60 | --- | --- | --- | --- | 0 | --- |
| 156: | | | | | | | |
| Midway, moist--- | 0-4 | 20-35 | 7.9-8.4 | 0-5 | 0-1 | 2.0-4.0 | 0-5 |
| | 4-15 | 20-35 | 7.4-8.4 | 5-15 | 1-15 | 2.0-8.0 | 1-15 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| Rock outcrop, moist---------- | 0-60 | --- | --- | --- | --- | 0 | --- |

Table 19.--Chemical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Cation-exchange capacity | Soil reaction | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
|---|---|---|---|---|---|---|---|
| | In | meq/100g | pH | Pct | Pct | mmhos/cm | |
| 157: | | | | | | | |
| Nunn | 0-5 | 20-35 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 5-19 | 20-40 | 6.6-8.4 | 0-5 | 0 | 0.0-2.0 | 0 |
| | 19-60 | 10-25 | 7.4-8.4 | 4-15 | 0 | 0.0-2.0 | 0 |
| 158: | | | | | | | |
| Nunn | 0-5 | 20-35 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 5-19 | 20-40 | 6.6-8.4 | 0-5 | 0 | 0.0-2.0 | 0 |
| | 19-60 | 10-25 | 7.4-8.4 | 4-15 | 0 | 0.0-2.0 | 0 |
| Sampson, rarely flooded | 0-7 | 10-25 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-36 | 10-25 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 36-60 | 5.0-20 | 7.9-8.4 | 3-15 | 0 | 0.0-2.0 | 0 |
| 159: | | | | | | | |
| Nunn, dry | 0-5 | 20-35 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 5-19 | 20-40 | 6.6-8.4 | 0-5 | 0 | 0.0-2.0 | 0 |
| | 19-60 | 10-25 | 7.4-8.4 | 4-15 | 0 | 0.0-2.0 | 0 |
| Sampson, dry, rarely flooded | 0-7 | 10-25 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-36 | 10-25 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 36-60 | 5.0-20 | 7.9-8.4 | 3-15 | 0 | 0.0-2.0 | 0 |
| 160: | | | | | | | |
| Olnest | 0-8 | 2.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 8-38 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 38-60 | 4.0-15 | 7.9-9.0 | 5-15 | 0 | 0 | 0 |
| 161: | | | | | | | |
| Olnest | 0-8 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 8-38 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 38-60 | 4.0-15 | 7.9-9.0 | 5-15 | 0 | 0 | 0 |
| 162: | | | | | | | |
| Olnest | 0-8 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 8-38 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 38-60 | 4.0-15 | 7.9-9.0 | 5-15 | 0 | 0 | 0 |
| 163: | | | | | | | |
| Olnest | 0-8 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 8-38 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 38-60 | 4.0-15 | 7.9-9.0 | 5-15 | 0 | 0 | 0 |
| 164: | | | | | | | |
| Olney | 0-7 | 2.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-36 | 10-25 | 6.6-7.8 | 0-10 | 0 | 0 | 0 |
| | 36-46 | 5.0-15 | 6.6-7.8 | 0-10 | 0 | 0 | 0 |
| | 46-60 | 1.0-15 | 7.4-9.0 | 5-15 | 0 | 0 | 0 |
| 165: | | | | | | | |
| Olney | 0-4 | 3.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-18 | 10-25 | 6.6-7.8 | 0-10 | 0 | 0 | 0 |
| | 18-31 | 5.0-15 | 6.6-7.8 | 0-10 | 0 | 0 | 0 |
| | 31-60 | 1.0-15 | 7.4-9.0 | 5-15 | 0 | 0 | 0 |
| 166: | | | | | | | |
| Olney | 0-4 | 3.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-18 | 10-25 | 6.6-7.8 | 0-10 | 0 | 0 | 0 |
| | 18-31 | 5.0-15 | 6.6-7.8 | 0-10 | 0 | 0 | 0 |
| | 31-60 | 1.0-15 | 7.4-9.0 | 5-15 | 0 | 0 | 0 |

Table 19.--Chemical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Cation-exchange capacity | Soil reaction | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
|---|---|---|---|---|---|---|---|
| | In | meq/100g | pH | Pct | Pct | mmhos/cm | |
| 167: | | | | | | | |
| Olney | 0-4 | 3.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-18 | 10-25 | 6.6-7.8 | 0-10 | 0 | 0 | 0 |
| | 18-31 | 5.0-15 | 6.6-7.8 | 0-10 | 0 | 0 | 0 |
| | 31-60 | 1.0-15 | 7.4-9.0 | 5-15 | 0 | 0 | 0 |
| 168: | | | | | | | |
| Olney | 0-4 | 3.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-18 | 10-25 | 6.6-7.8 | 0-10 | 0 | 0 | 0 |
| | 18-31 | 5.0-15 | 6.6-7.8 | 0-10 | 0 | 0 | 0 |
| | 31-60 | 1.0-15 | 7.4-9.0 | 5-15 | 0 | 0 | 0 |
| Midway | 0-4 | 20-35 | 7.9-8.4 | 0-5 | 0-1 | 2.0-4.0 | 0-5 |
| | 4-15 | 20-35 | 7.4-8.4 | 5-15 | 1-15 | 2.0-8.0 | 1-15 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| 169: | | | | | | | |
| Otero | 0-13 | 5.0-15 | 7.4-7.8 | 0-5 | 0 | 0 | 0 |
| | 13-60 | 2.0-10 | 7.4-8.4 | 1-5 | 0 | 0 | 0 |
| 170: | | | | | | | |
| Oterodry | 0-11 | 3.0-15 | 7.9-8.4 | 0-5 | 0 | 0 | 0 |
| | 11-60 | 2.0-15 | 7.4-8.4 | 1-10 | 0 | 0.0-2.0 | 0 |
| 171: | | | | | | | |
| Oterodry | 0-11 | 3.0-15 | 7.9-8.4 | 0-5 | 0 | 0 | 0 |
| | 11-60 | 2.0-15 | 7.4-8.4 | 1-10 | 0 | 0.0-2.0 | 0 |
| 172: | | | | | | | |
| Platner | 0-7 | 10-20 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-15 | 15-35 | 6.6-7.8 | 0-5 | 0 | 0 | 0 |
| | 15-40 | 20-35 | 7.4-8.4 | 1-15 | 0 | 0.0-2.0 | 0 |
| | 40-60 | 5.0-20 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |
| 173: | | | | | | | |
| Platner | 0-7 | 10-20 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-15 | 15-35 | 6.6-7.8 | 0-5 | 0 | 0 | 0 |
| | 15-40 | 20-35 | 7.4-8.4 | 1-15 | 0 | 0.0-2.0 | 0 |
| | 40-60 | 5.0-20 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |
| Ascalon | 0-4 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-15 | 10-20 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 15-60 | 5.0-15 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |
| 174: | | | | | | | |
| Pleasant, rarely ponded | 0-2 | 15-30 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 2-40 | 25-50 | 7.4-8.4 | 0 | 0 | 0 | 0 |
| | 40-60 | 15-35 | 7.4-8.4 | 0-5 | 0 | 0 | 0 |
| 175: | | | | | | | |
| Rago, rarely flooded | 0-10 | 15-30 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 10-47 | 20-40 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 47-60 | 10-25 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |
| 176: | | | | | | | |
| Rago, dry, rarely flooded | 0-10 | 15-30 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 10-47 | 20-40 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 47-60 | 10-25 | 7.9-8.4 | 5-15 | 0 | 0.0-2.0 | 0 |

Table 19.--Chemical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Cation-exchange capacity | Soil reaction | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
|---|---|---|---|---|---|---|---|
| | In | meq/100g | pH | Pct | Pct | mmhos/cm | |
| 177: | | | | | | | |
| Razor---------- | 0-2 | 20-35 | 7.9-8.4 | 0-5 | 0 | 0.0-2.0 | 0-5 |
| | 2-15 | 20-50 | 7.4-8.4 | 1-10 | 0 | 2.0-8.0 | 0-10 |
| | 15-27 | 20-50 | 7.4-8.4 | 1-15 | 0-5 | 4.0-8.0 | 10-15 |
| | 27-37 | --- | --- | --- | --- | --- | --- |
| 178: | | | | | | | |
| Razor, moist---- | 0-2 | 20-35 | 7.9-8.4 | 0-5 | 0 | 0.0-2.0 | 0-5 |
| | 2-15 | 20-50 | 7.4-8.4 | 1-10 | 0 | 2.0-8.0 | 0-10 |
| | 15-27 | 20-50 | 7.4-8.4 | 1-15 | 0-5 | 4.0-8.0 | 10-15 |
| | 27-37 | --- | --- | --- | --- | --- | --- |
| 179: | | | | | | | |
| Sampson, rarely flooded-------- | 0-7 | 10-25 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-36 | 10-25 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 36-60 | 5.0-20 | 7.9-8.4 | 3-15 | 0 | 0.0-2.0 | 0 |
| 180: | | | | | | | |
| Sampson, dry, rarely flooded- | 0-7 | 10-25 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-36 | 10-25 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 36-60 | 5.0-20 | 7.9-8.4 | 3-15 | 0 | 0.0-2.0 | 0 |
| 181: | | | | | | | |
| Satanta--------- | 0-4 | 10-20 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-19 | 10-25 | 6.1-8.4 | 0-5 | 0 | 0 | 0 |
| | 19-28 | 5.0-25 | 7.4-8.4 | 1-15 | 0 | 0 | 0 |
| | 28-60 | 2.0-15 | 7.4-8.4 | 1-15 | 0 | 0 | 0 |
| 182: | | | | | | | |
| Satanta, dry---- | 0-4 | 10-20 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-19 | 10-25 | 6.1-8.4 | 0-5 | 0 | 0 | 0 |
| | 19-28 | 5.0-25 | 7.4-8.4 | 1-15 | 0 | 0 | 0 |
| | 28-60 | 2.0-15 | 7.4-8.4 | 1-15 | 0 | 0 | 0 |
| 183: | | | | | | | |
| Seldom, rarely flooded-------- | 0-7 | 4.0-15 | 6.6-7.3 | 0-5 | 0 | 0.0-4.0 | 0 |
| | 7-15 | 4.0-15 | 7.4-8.4 | 0-15 | 0 | 0.0-4.0 | 0 |
| | 15-42 | 3.0-15 | 7.9-9.6 | 5-20 | 0 | 0.0-4.0 | 0 |
| | 42-60 | 4.0-25 | 7.9-9.0 | 5-20 | 0 | 0.0-4.0 | 0 |
| 184: | | | | | | | |
| Shingle--------- | 0-4 | 10-25 | 7.4-7.8 | 5-10 | 0 | 0.0-2.0 | 0 |
| | 4-15 | 5.0-20 | 7.4-8.4 | 5-15 | 0-5 | 0.0-2.0 | 0 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| Midway---------- | 0-4 | 20-35 | 7.9-8.4 | 0-5 | 0-1 | 2.0-4.0 | 0-5 |
| | 4-15 | 20-35 | 7.4-8.4 | 5-15 | 1-15 | 2.0-8.0 | 1-15 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| 185: | | | | | | | |
| Shingle, moist-- | 0-4 | 10-25 | 7.4-7.8 | 5-10 | 0 | 0.0-2.0 | 0 |
| | 4-15 | 5.0-20 | 7.4-8.4 | 5-15 | 0-5 | 0.0-2.0 | 0 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| Midway, moist--- | 0-4 | 20-35 | 7.9-8.4 | 0-5 | 0-1 | 2.0-4.0 | 0-5 |
| | 4-15 | 20-35 | 7.4-8.4 | 5-15 | 1-15 | 2.0-8.0 | 1-15 |
| | 15-25 | --- | --- | --- | --- | --- | --- |

Table 19.--Chemical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Cation-exchange capacity | Soil reaction | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
|---|---|---|---|---|---|---|---|
| | In | meq/100g | pH | Pct | Pct | mmhos/cm | |
| 186: | | | | | | | |
| Sundance-------- | 0-8 | 3.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 8-17 | 10-20 | 6.6-7.3 | 0-5 | 0 | 0 | 0 |
| | 17-28 | 10-25 | 7.4-8.4 | 1-15 | 0 | 0.0-2.0 | 0 |
| | 28-84 | 10-20 | 7.9-8.4 | 1-15 | 0 | 0.0-2.0 | 0 |
| 187: | | | | | | | |
| Table Mountain, rarely flooded- | 0-6 | 10-25 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 6-29 | 10-25 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 29-60 | 5.0-20 | 6.6-8.4 | 0-5 | 0 | 0 | 0 |
| 188: | | | | | | | |
| Travessilla----- | 0-3 | 5.0-15 | 7.4-7.8 | 0-5 | 0 | 0 | 0 |
| | 3-13 | 4.0-15 | 7.4-8.4 | 0-5 | 0 | 0 | 0 |
| | 13-23 | --- | --- | --- | --- | --- | --- |
| Rock outcrop---- | 0-60 | --- | --- | --- | --- | --- | --- |
| 189: | | | | | | | |
| Truckton-------- | 0-6 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 6-16 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 16-60 | 1.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| 190: | | | | | | | |
| Truckton-------- | 0-6 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 6-16 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 16-60 | 1.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| 191: | | | | | | | |
| Truckton, dry--- | 0-6 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 6-16 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 16-60 | 1.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| 192: | | | | | | | |
| Truckton, dry--- | 0-6 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 6-16 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 16-60 | 1.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| 193: | | | | | | | |
| Valent---------- | 0-3 | 1.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 3-60 | 0.0-5.0 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| 194: | | | | | | | |
| Valent---------- | 0-3 | 1.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 3-60 | 0.0-5.0 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| Bijou----------- | 0-4 | 3.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-9 | 3.0-10 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 9-36 | 5.0-15 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 36-60 | 2.0-5.0 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| 195: | | | | | | | |
| Valent---------- | 0-3 | 1.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 3-60 | 0.0-5.0 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| Vona------------ | 0-7 | 3.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-16 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 16-25 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 25-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |

Table 19.--Chemical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Cation-exchange capacity | Soil reaction | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
|---|---|---|---|---|---|---|---|
| | In | meq/100g | pH | Pct | Pct | mmhos/cm | |
| 196: | | | | | | | |
| Valent | 0-3 | 1.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 3-60 | 0.0-5.0 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| Vonid | 0-6 | 3.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 6-34 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 34-52 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 52-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| 197: | | | | | | | |
| Vona | 0-7 | 3.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-16 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 16-25 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 25-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| 198: | | | | | | | |
| Vona | 0-7 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-16 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 16-25 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 25-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| 199: | | | | | | | |
| Vona | 0-7 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-16 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 16-25 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 25-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| 200: | | | | | | | |
| Vona | 0-7 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-16 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 16-25 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 25-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| Karval | 0-5 | 2.0-10 | 5.6-6.0 | 0-2 | 0 | 0 | 0 |
| | 5-40 | 1.0-5.0 | 6.6-8.4 | 2-5 | 0 | 0 | 0 |
| | 40-60 | 1.0-5.0 | 6.6-8.4 | 0-5 | 0 | 0.0-2.0 | 0 |
| Midway, moist | 0-4 | 20-35 | 7.9-8.4 | 0-5 | 0-1 | 2.0-4.0 | 0-5 |
| | 4-15 | 20-35 | 7.4-8.4 | 5-15 | 1-15 | 2.0-8.0 | 1-15 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| 201: | | | | | | | |
| Vona | 0-7 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-16 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 16-25 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 25-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| Midway, moist | 0-4 | 20-35 | 7.9-8.4 | 0-5 | 0-1 | 2.0-4.0 | 0-5 |
| | 4-15 | 20-35 | 7.4-8.4 | 5-15 | 1-15 | 2.0-8.0 | 1-15 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| 202: | | | | | | | |
| Vona | 0-7 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 7-16 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 16-25 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 25-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| Seldom | 0-7 | 4.0-15 | 6.6-7.3 | 0-5 | 0 | 0.0-4.0 | 0 |
| | 7-15 | 4.0-15 | 7.4-8.4 | 0-15 | 0 | 0.0-4.0 | 0 |
| | 15-42 | 3.0-15 | 7.9-9.6 | 5-20 | 0 | 0.0-4.0 | 0 |
| | 42-60 | 4.0-25 | 7.9-9.0 | 5-20 | 0 | 0.0-4.0 | 0 |

Table 19.--Chemical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Cation-exchange capacity | Soil reaction | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
|---|---|---|---|---|---|---|---|
| | In | meq/100g | pH | Pct | Pct | mmhos/cm | |
| 203: | | | | | | | |
| Vonid | 0-6 | 3.0-10 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 6-34 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 34-52 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 52-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| 204: | | | | | | | |
| Vonid | 0-6 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 6-34 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 34-52 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 52-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| 205: | | | | | | | |
| Vonid | 0-6 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 6-34 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 34-52 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 52-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| 206: | | | | | | | |
| Vonid | 0-6 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 6-34 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 34-52 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 52-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| Karval | 0-5 | 2.0-10 | 5.6-6.0 | 0-2 | 0 | 0 | 0 |
| | 5-40 | 1.0-5.0 | 6.6-8.4 | 2-5 | 0 | 0 | 0 |
| | 40-60 | 1.0-5.0 | 6.6-8.4 | 0-5 | 0 | 0.0-2.0 | 0 |
| Midway | 0-4 | 20-35 | 7.9-8.4 | 0-5 | 0-1 | 2.0-4.0 | 0-5 |
| | 4-15 | 20-35 | 7.4-8.4 | 5-15 | 1-15 | 2.0-8.0 | 1-15 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| 207: | | | | | | | |
| Vonid | 0-6 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 6-34 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 34-52 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 52-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| Midway | 0-4 | 20-35 | 7.9-8.4 | 0-5 | 0-1 | 2.0-4.0 | 0-5 |
| | 4-15 | 20-35 | 7.4-8.4 | 5-15 | 1-15 | 2.0-8.0 | 1-15 |
| | 15-25 | --- | --- | --- | --- | --- | --- |
| 208: | | | | | | | |
| Vonid | 0-6 | 5.0-15 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 6-34 | 5.0-15 | 6.6-8.4 | 0-10 | 0 | 0 | 0 |
| | 34-52 | 2.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 52-60 | 1.0-10 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| Seldom | 0-7 | 4.0-15 | 6.6-7.3 | 0-5 | 0 | 0.0-4.0 | 0 |
| | 7-15 | 4.0-15 | 7.4-8.4 | 0-15 | 0 | 0.0-4.0 | 0 |
| | 15-42 | 3.0-15 | 7.9-9.6 | 5-20 | 0 | 0.0-4.0 | 0 |
| | 42-60 | 4.0-25 | 7.9-9.0 | 5-20 | 0 | 0.0-4.0 | 0 |
| 209: | | | | | | | |
| Wages | 0-5 | 10-20 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 5-12 | 10-25 | 7.4-7.8 | 0 | 0 | 0 | 0 |
| | 12-17 | 10-20 | 7.9-8.4 | 5-15 | 0 | 0 | 0 |
| | 17-60 | 4.0-20 | 7.4-8.4 | 5-15 | 0 | 0 | 0 |

Table 19.--Chemical Properties of the Soils--Continued

| Map symbol and soil name | Depth | Cation-exchange capacity | Soil reaction | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
|---|---|---|---|---|---|---|---|
| | In | meq/100g | pH | Pct | Pct | mmhos/cm | |
| 210: | | | | | | | |
| Wages | 0-4 | 10-20 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-10 | 10-25 | 7.4-7.8 | 0-5 | 0 | 0 | 0 |
| | 10-35 | 5.0-25 | 7.9-8.4 | 4-15 | 0 | 0.0-2.0 | 0 |
| | 35-60 | 4.0-15 | 7.4-8.4 | 4-15 | 0 | 0.0-2.0 | 0 |
| 211: | | | | | | | |
| Wages, dry | 0-4 | 10-20 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-10 | 10-25 | 7.4-7.8 | 0-5 | 0 | 0 | 0 |
| | 10-35 | 5.0-25 | 7.9-8.4 | 4-15 | 0 | 0.0-2.0 | 0 |
| | 35-60 | 4.0-15 | 7.4-8.4 | 4-15 | 0 | 0.0-2.0 | 0 |
| 212: | | | | | | | |
| Wages | 0-4 | 10-20 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-10 | 10-25 | 7.4-7.8 | 0-5 | 0 | 0 | 0 |
| | 10-35 | 5.0-25 | 7.9-8.4 | 4-15 | 0 | 0.0-2.0 | 0 |
| | 35-60 | 4.0-15 | 7.4-8.4 | 4-15 | 0 | 0.0-2.0 | 0 |
| Karval | 0-5 | 2.0-10 | 5.6-6.0 | 0-2 | 0 | 0 | 0 |
| | 5-40 | 1.0-5.0 | 6.6-8.4 | 2-5 | 0 | 0 | 0 |
| | 40-60 | 1.0-5.0 | 6.6-8.4 | 0-5 | 0 | 0.0-2.0 | 0 |
| 213: | | | | | | | |
| Weld | 0-4 | 15-20 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-19 | 20-40 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 19-44 | 15-30 | 7.4-8.4 | 5-15 | 0 | 0 | 0 |
| | 44-60 | 10-20 | 7.9-9.0 | 5-15 | 0 | 0 | 0 |
| 214: | | | | | | | |
| Weld, dry | 0-4 | 15-20 | 6.6-7.3 | 0 | 0 | 0 | 0 |
| | 4-19 | 20-40 | 6.6-7.8 | 0 | 0 | 0 | 0 |
| | 19-44 | 15-30 | 7.4-8.4 | 5-15 | 0 | 0 | 0 |
| | 44-60 | 10-20 | 7.9-9.0 | 5-15 | 0 | 0 | 0 |
| 215: | | | | | | | |
| Wiley | 0-4 | 5.0-20 | 7.9-8.4 | 0-10 | 0 | 0 | 0 |
| | 4-23 | 5.0-20 | 7.4-9.0 | 5-15 | 0 | 0 | 0 |
| | 23-60 | 5.0-15 | 7.9-9.0 | 5-15 | 0 | 0 | 0 |
| 216: | | | | | | | |
| Wiley | 0-4 | 5.0-20 | 7.9-8.4 | 0-10 | 0 | 0 | 0 |
| | 4-23 | 5.0-20 | 7.4-9.0 | 5-15 | 0 | 0 | 0 |
| | 23-60 | 5.0-15 | 7.9-9.0 | 5-15 | 0 | 0 | 0 |
| 217: | | | | | | | |
| Wilid | 0-3 | 5.0-20 | 7.9-8.4 | 0-10 | 0 | 0 | 0 |
| | 3-21 | 5.0-20 | 7.4-9.0 | 5-15 | 0 | 0 | 0 |
| | 21-60 | 5.0-15 | 7.9-9.0 | 5-15 | 0 | 0 | 0 |
| 218: | | | | | | | |
| Water. | | | | | | | |
| 219: | | | | | | | |
| Gravel pits | 0-5 | --- | --- | --- | --- | 0 | --- |
| | 5-60 | --- | --- | --- | --- | 0 | --- |
| 220: | | | | | | | |
| Access denied. | | | | | | | |

Table 20.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

| Map symbol and soil name | Restrictive layer | | Potential frost action | Risk of corrosion | |
|---|---|---|---|---|---|
| | Depth | Kind | | Uncoated steel | Concrete |
| | In | | | | |
| 101: Apishapa, rarely ponded | --- | --- | High | High | High |
| 102: Arvada | --- | --- | Low | High | High |
| 103: Ascalon | --- | --- | Moderate | Moderate | Low |
| 104: Ascalon | --- | --- | Moderate | Moderate | Low |
| 105: Ascalon | --- | --- | Moderate | Moderate | Low |
| 106: Ascalon, dry | --- | --- | Moderate | Moderate | Low |
| 107: Ascalon, dry | --- | --- | Moderate | Moderate | Low |
| 108: Ascalon, dry | --- | --- | Moderate | Moderate | Low |
| 109: Ascalon | --- | --- | Moderate | Moderate | Low |
| Haxtun | --- | --- | Moderate | Moderate | Low |
| 110: Ascalon, dry | --- | --- | Moderate | Moderate | Low |
| Haxtun, dry | --- | --- | Moderate | Moderate | Low |
| 111: Bacid | --- | --- | Low | High | Low |
| 112: Bankard, occasionally flooded | --- | --- | Low | Moderate | Low |
| Glenberg, occasionally flooded | --- | --- | Low | Moderate | Low |
| 113: Bijou | --- | --- | Low | Moderate | Low |
| 114: Bijou, moist | --- | --- | Low | Moderate | Low |
| 115: Bijou, moist | --- | --- | Low | Moderate | Low |
| 116: Blakeland | --- | --- | Low | Moderate | Low |
| 117: Bresser | --- | --- | Moderate | Moderate | Low |

Table 20.--Soil Features--Continued

| Map symbol and soil name | Restrictive layer | | Potential frost action | Risk of corrosion | |
|---|---|---|---|---|---|
| | Depth | Kind | | Uncoated steel | Concrete |
| | In | | | | |
| 118: | | | | | |
| Campo | --- | --- | Low | High | Low |
| 119: | | | | | |
| Canyon | 10-20 | Bedrock (paralithic) | Low | High | Low |
| Rock outcrop | 0-0 | Bedrock (lithic) | None | --- | --- |
| 120: | | | | | |
| Colby | --- | --- | Low | Moderate | Low |
| 121: | | | | | |
| Colby | --- | --- | Low | Moderate | Low |
| 122: | | | | | |
| Colby | --- | --- | Low | Moderate | Low |
| Weld | --- | --- | Low | High | Low |
| 123: | | | | | |
| Firstview | --- | --- | Low | High | High |
| 124: | | | | | |
| Fort Collins | --- | --- | Low | High | Low |
| 125: | | | | | |
| Fort Collins | --- | --- | Low | High | Low |
| 126: | | | | | |
| Fort Collins | --- | --- | Low | High | Low |
| Karval | --- | --- | Low | Moderate | Low |
| 127: | | | | | |
| Fort Collins | --- | --- | Low | High | Low |
| Platner | --- | --- | Low | Moderate | Low |
| 128: | | | | | |
| Fort Collins | --- | --- | Low | High | Low |
| Razor, moist | 20-40 | Bedrock (paralithic) | Low | High | High |
| 129: | | | | | |
| Fort | --- | --- | Low | High | Low |
| 130: | | | | | |
| Fort | --- | --- | Low | High | Low |
| 131: | | | | | |
| Fort | --- | --- | Low | High | Low |
| Karval | --- | --- | Low | Moderate | Low |
| 132: | | | | | |
| Fort | --- | --- | Low | High | Low |
| Razor | 20-40 | Bedrock (paralithic) | Low | High | High |
| 133: | | | | | |
| Haversid, rarely flooded | --- | --- | Low | High | Low |

Table 20.--Soil Features--Continued

| Map symbol and soil name | Restrictive layer | | Potential frost action | Risk of corrosion | |
|---|---|---|---|---|---|
| | Depth | Kind | | Uncoated steel | Concrete |
| | In | | | | |
| 134: Haverson, rarely flooded | --- | --- | Low | Moderate | Low |
| 135: Haxtun | --- | --- | Moderate | Moderate | Low |
| 136: Haxtun, dry | --- | --- | Moderate | Moderate | Low |
| 137: Haxtun, dry | --- | --- | Moderate | Moderate | Low |
| Olney | --- | --- | Low | Low | Low |
| 138: Haxtun | --- | --- | Moderate | Moderate | Low |
| Olnest | --- | --- | Moderate | High | Low |
| 139: Keith | --- | --- | Moderate | Moderate | Low |
| 140: Keith | --- | --- | Moderate | Moderate | Low |
| 141: Kim | --- | --- | Low | Moderate | Low |
| 142: Kim | --- | --- | Low | Moderate | Low |
| 143: Kimst | --- | --- | Low | High | Low |
| 144: Kimst | --- | --- | Low | High | Low |
| 145: Las Animas, occasionally flooded | --- | --- | High | High | High |
| 146: Limon, rarely flooded | --- | --- | Low | High | Moderate |
| 147: Limon, moist, rarely flooded | --- | --- | Low | High | Moderate |
| 148: Manzanola | --- | --- | Low | High | High |
| 149: Manzanst, rarely flooded | --- | --- | Low | High | Low |
| 150: Manzanst | --- | --- | Low | High | Low |
| 151: Midway | 6-20 | Bedrock (paralithic) | Low | High | Low |

Table 20.--Soil Features--Continued

| Map symbol and soil name | Restrictive layer | | Potential frost action | Risk of corrosion | |
|---|---|---|---|---|---|
| | Depth | Kind | | Uncoated steel | Concrete |
| | In | | | | |
| 152: | | | | | |
| Midway, moist--- | 6-20 | Bedrock (paralithic) | Low | High | Low |
| 153: | | | | | |
| Midway---------- | 6-20 | Bedrock (paralithic) | Low | High | Low |
| Razor----------- | 20-40 | Bedrock (paralithic) | Low | High | High |
| 154: | | | | | |
| Midway, moist--- | 6-20 | Bedrock (paralithic) | Low | High | Low |
| Razor, moist---- | 20-40 | Bedrock (paralithic) | Low | High | High |
| 155: | | | | | |
| Midway---------- | 6-20 | Bedrock (paralithic) | Low | High | Low |
| Rock outcrop---- | 0-0 | Bedrock (paralithic) | None | --- | --- |
| 156: | | | | | |
| Midway, moist--- | 6-20 | Bedrock (paralithic) | Low | High | Low |
| Rock outcrop, moist---------- | 0-0 | Bedrock (paralithic) | None | --- | --- |
| 157: | | | | | |
| Nunn------------ | --- | --- | Moderate | High | Low |
| 158: | | | | | |
| Nunn------------ | --- | --- | Moderate | High | Low |
| Sampson, rarely flooded-------- | --- | --- | Moderate | High | Low |
| 159: | | | | | |
| Nunn, dry------- | --- | --- | Moderate | High | Low |
| Sampson, dry, rarely flooded- | --- | --- | Moderate | High | Low |
| 160: | | | | | |
| Olnest---------- | --- | --- | Moderate | High | Low |
| 161: | | | | | |
| Olnest---------- | --- | --- | Moderate | High | Low |
| 162: | | | | | |
| Olnest---------- | --- | --- | Moderate | High | Low |
| 163: | | | | | |
| Olnest---------- | --- | --- | Moderate | High | Low |
| 164: | | | | | |
| Olney----------- | --- | --- | Low | Low | Low |
| 165: | | | | | |
| Olney----------- | --- | --- | Low | Low | Low |

Table 20.--Soil Features--Continued

| Map symbol and soil name | Restrictive layer | | Potential frost action | Risk of corrosion | |
|---|---|---|---|---|---|
| | Depth | Kind | | Uncoated steel | Concrete |
| | In | | | | |
| 166: | | | | | |
| Olney | --- | --- | Low | Low | Low |
| 167: | | | | | |
| Olney | --- | --- | Low | Low | Low |
| 168: | | | | | |
| Olney | --- | --- | Low | Low | Low |
| Midway | 6-20 | Bedrock (paralithic) | Low | High | Low |
| 169: | | | | | |
| Otero | --- | --- | Low | High | Low |
| 170: | | | | | |
| Oterodry | --- | --- | Low | High | Low |
| 171: | | | | | |
| Oterodry | --- | --- | Low | High | Low |
| 172: | | | | | |
| Platner | --- | --- | Low | Moderate | Low |
| 173: | | | | | |
| Platner | --- | --- | Low | Moderate | Low |
| Ascalon | --- | --- | Moderate | Moderate | Low |
| 174: | | | | | |
| Pleasant, rarely ponded | --- | --- | Low | High | Low |
| 175: | | | | | |
| Rago, rarely flooded | --- | --- | Low | High | Low |
| 176: | | | | | |
| Rago, dry, rarely flooded- | --- | --- | Low | High | Low |
| 177: | | | | | |
| Razor | 20-40 | Bedrock (paralithic) | Low | High | High |
| 178: | | | | | |
| Razor, moist | 20-40 | Bedrock (paralithic) | Low | High | High |
| 179: | | | | | |
| Sampson, rarely flooded | --- | --- | Moderate | High | Low |
| 180: | | | | | |
| Sampson, dry, rarely flooded- | --- | --- | Moderate | High | Low |
| 181: | | | | | |
| Satanta | --- | --- | Moderate | High | Low |
| 182: | | | | | |
| Satanta, dry | --- | --- | Moderate | High | Low |

Table 20.--Soil Features--Continued

| Map symbol and soil name | Restrictive layer | | Potential frost action | Risk of corrosion | |
|---|---|---|---|---|---|
| | Depth | Kind | | Uncoated steel | Concrete |
| | In | | | | |
| 183: | | | | | |
| Seldom, rarely flooded | --- | --- | Low | High | Moderate |
| 184: | | | | | |
| Shingle | 10-20 | Bedrock (paralithic) | Low | Moderate | Low |
| Midway | 6-20 | Bedrock (paralithic) | Low | High | Low |
| 185: | | | | | |
| Shingle, moist | 10-20 | Bedrock (paralithic) | Low | Moderate | Low |
| Midway, moist | 6-20 | Bedrock (paralithic) | Low | High | Low |
| 186: | | | | | |
| Sundance | --- | --- | Low | High | Low |
| 187: | | | | | |
| Table Mountain, rarely flooded | --- | --- | Moderate | High | Low |
| 188: | | | | | |
| Travessilla | 4-20 | Bedrock (lithic) | Low | Moderate | Low |
| Rock outcrop | 0-0 | Bedrock (lithic) | None | --- | --- |
| 189: | | | | | |
| Truckton | --- | --- | Moderate | Moderate | Moderate |
| 190: | | | | | |
| Truckton | --- | --- | Moderate | Moderate | Moderate |
| 191: | | | | | |
| Truckton, dry | --- | --- | Moderate | Moderate | Moderate |
| 192: | | | | | |
| Truckton, dry | --- | --- | Moderate | Moderate | Moderate |
| 193: | | | | | |
| Valent | --- | --- | Low | Moderate | Low |
| 194: | | | | | |
| Valent | --- | --- | Low | Moderate | Low |
| Bijou | --- | --- | Low | Moderate | Low |
| 195: | | | | | |
| Valent | --- | --- | Low | Moderate | Low |
| Vona | --- | --- | Low | High | Low |
| 196: | | | | | |
| Valent | --- | --- | Low | Moderate | Low |
| Vonid | --- | --- | Low | High | Low |
| 197: | | | | | |
| Vona | --- | --- | Low | High | Low |

Table 20.--Soil Features--Continued

| Map symbol and soil name | Restrictive layer | | Potential frost action | Risk of corrosion | |
|---|---|---|---|---|---|
| | Depth | Kind | | Uncoated steel | Concrete |
| | In | | | | |
| 198: | | | | | |
| Vona | --- | --- | Low | High | Low |
| 199: | | | | | |
| Vona | --- | --- | Low | High | Low |
| 200: | | | | | |
| Vona | --- | --- | Low | High | Low |
| Karval | --- | --- | Low | Moderate | Low |
| Midway, moist | 6-20 | Bedrock (paralithic) | Low | High | Low |
| 201: | | | | | |
| Vona | --- | --- | Low | High | Low |
| Midway, moist | 6-20 | Bedrock (paralithic) | Low | High | Low |
| 202: | | | | | |
| Vona | --- | --- | Low | High | Low |
| Seldom | --- | --- | Low | High | Moderate |
| 203: | | | | | |
| Vonid | --- | --- | Low | High | Low |
| 204: | | | | | |
| Vonid | --- | --- | Low | High | Low |
| 205: | | | | | |
| Vonid | --- | --- | Low | High | Low |
| 206: | | | | | |
| Vonid | --- | --- | Low | High | Low |
| Karval | --- | --- | Low | Moderate | Low |
| Midway | 6-20 | Bedrock (paralithic) | Low | High | Low |
| 207: | | | | | |
| Vonid | --- | --- | Low | High | Low |
| Midway | 6-20 | Bedrock (paralithic) | Low | High | Low |
| 208: | | | | | |
| Vonid | --- | --- | Low | High | Low |
| Seldom | --- | --- | Low | High | Moderate |
| 209: | | | | | |
| Wages | --- | --- | Moderate | Moderate | Low |
| 210: | | | | | |
| Wages | --- | --- | Moderate | High | Low |
| 211: | | | | | |
| Wages, dry | --- | --- | Moderate | High | Low |
| 212: | | | | | |
| Wages | --- | --- | Moderate | High | Low |

Table 20.--Soil Features--Continued

| Map symbol and soil name | Restrictive layer | | Potential frost action | Risk of corrosion | |
|---|---|---|---|---|---|
| | Depth | Kind | | Uncoated steel | Concrete |
| | In | | | | |
| 212: | | | | | |
| Karval---------- | --- | --- | Low | Moderate | Low |
| 213: | | | | | |
| Weld---------- | --- | --- | Low | High | Low |
| 214: | | | | | |
| Weld, dry------- | --- | --- | Low | High | Low |
| 215: | | | | | |
| Wiley----------- | --- | --- | Moderate | High | Low |
| 216: | | | | | |
| Wiley----------- | --- | --- | Moderate | High | Low |
| 217: | | | | | |
| Wilid----------- | --- | --- | Moderate | High | Low |
| 218: | | | | | |
| Water. | | | | | |
| 219: | | | | | |
| Gravel pits----- | --- | --- | None | --- | --- |
| 220: | | | | | |
| Access denied. | | | | | |

Table 21.--Water Features

(See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

| Map symbol and soil name | Hydrologic group | Month | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | Ft | Ft | Ft | | | | |
| 101: | | | | | | | | | |
| Apishapa, rarely ponded | D | | | | | | | | |
| | | April | 0.0 | 0.0-1.0 | 0.0-3.0 | --- | Rare | --- | None |
| | | May | 0.0 | 0.0-1.0 | 0.0-3.0 | --- | Rare | --- | None |
| | | June | 0.0 | 0.0-1.0 | 0.0-3.0 | --- | Rare | --- | None |
| | | July | 0.0 | 0.0-1.0 | 0.0-3.0 | --- | Rare | --- | None |
| | | August | 0.0 | 0.0-1.0 | 0.0-3.0 | --- | Rare | --- | None |
| | | September | 0.0 | 0.0-1.0 | 0.0-3.0 | --- | Rare | --- | None |
| 102: | | | | | | | | | |
| Arvada | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 103: | | | | | | | | | |
| Ascalon | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 104: | | | | | | | | | |
| Ascalon | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 105: | | | | | | | | | |
| Ascalon | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 106: | | | | | | | | | |
| Ascalon, dry | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 107: | | | | | | | | | |
| Ascalon, dry | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 108: | | | | | | | | | |
| Ascalon, dry | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 109: | | | | | | | | | |
| Ascalon | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Haxtun | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 110: | | | | | | | | | |
| Ascalon, dry | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Haxtun, dry | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 111: | | | | | | | | | |
| Bacid | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |

Table 21.--Water Features--Continued

| Map symbol and soil name | Hydrologic group | Month | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | Ft | Ft | Ft | | | | |
| 112: | | | | | | | | | |
| Bankard, occasionally flooded | A | | | | | | | | |
| | | April | --- | --- | --- | --- | None | Brief | Occasional |
| | | May | --- | --- | --- | --- | None | Brief | Occasional |
| | | June | --- | --- | --- | --- | None | Brief | Occasional |
| | | July | --- | --- | --- | --- | None | Brief | Occasional |
| | | August | --- | --- | --- | --- | None | Brief | Occasional |
| | | September | --- | --- | --- | --- | None | Brief | Occasional |
| Glenberg, occasionaly flooded | B | | | | | | | | |
| | | April | --- | --- | --- | --- | None | Very brief | Occasional |
| | | May | --- | --- | --- | --- | None | Very brief | Occasional |
| | | June | --- | --- | --- | --- | None | Very brief | Occasional |
| | | July | --- | --- | --- | --- | None | Very brief | Occasional |
| | | August | --- | --- | --- | --- | None | Very brief | Occasional |
| | | September | --- | --- | --- | --- | None | Very brief | Occasional |
| 113: | | | | | | | | | |
| Bijou | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 114: | | | | | | | | | |
| Bijou, moist | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 115: | | | | | | | | | |
| Bijou, moist | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 116: | | | | | | | | | |
| Blakeland | A | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 117: | | | | | | | | | |
| Bresser | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 118: | | | | | | | | | |
| Campo | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 119: | | | | | | | | | |
| Canyon | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Rock outcrop | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 120: | | | | | | | | | |
| Colby | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 121: | | | | | | | | | |
| Colby | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 122: | | | | | | | | | |
| Colby | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |

Table 21.--Water Features--Continued

| Map symbol and soil name | Hydrologic group | Month | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | Ft | Ft | Ft | | | | |
| 122: | | | | | | | | | |
| Weld | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 123: | | | | | | | | | |
| Firstview | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 124: | | | | | | | | | |
| Fort Collins | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 125: | | | | | | | | | |
| Fort Collins | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 126: | | | | | | | | | |
| Fort Collins | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Karval | A | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 127: | | | | | | | | | |
| Fort Collins | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Platner | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 128: | | | | | | | | | |
| Fort Collins | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Razor, moist | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 129: | | | | | | | | | |
| Fort | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 130: | | | | | | | | | |
| Fort | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 131: | | | | | | | | | |
| Fort | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Karval | A | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 132: | | | | | | | | | |
| Fort | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Razor | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |

Table 21.--Water Features--Continued

| Map symbol and soil name | Hydrologic group | Month | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | Ft | Ft | Ft | | | | |
| 133: | | | | | | | | | |
| Haversid, rarely flooded-- | B | | | | | | | | |
| | | May | --- | --- | --- | --- | None | --- | Rare |
| | | June | --- | --- | --- | --- | None | --- | Rare |
| | | July | --- | --- | --- | --- | None | --- | Rare |
| | | August | --- | --- | --- | --- | None | --- | Rare |
| 134: | | | | | | | | | |
| Haverson, rarely flooded-- | B | | | | | | | | |
| | | April | --- | --- | --- | --- | None | --- | Rare |
| | | May | --- | --- | --- | --- | None | --- | Rare |
| | | June | --- | --- | --- | --- | None | --- | Rare |
| | | July | --- | --- | --- | --- | None | --- | Rare |
| | | August | --- | --- | --- | --- | None | --- | Rare |
| | | September | --- | --- | --- | --- | None | --- | Rare |
| 135: | | | | | | | | | |
| Haxtun---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 136: | | | | | | | | | |
| Haxtun, dry---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 137: | | | | | | | | | |
| Haxtun, dry---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Olney---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 138: | | | | | | | | | |
| Haxtun---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Olnest---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 139: | | | | | | | | | |
| Keith---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 140: | | | | | | | | | |
| Keith---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 141: | | | | | | | | | |
| Kim---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 142: | | | | | | | | | |
| Kim---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 143: | | | | | | | | | |
| Kimst---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 144: | | | | | | | | | |
| Kimst---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |

Table 21.--Water Features--Continued

| Map symbol and soil name | Hydrologic group | Month | Water table: Upper limit | Water table: Lower limit | Ponding: Surface water depth | Ponding: Duration | Ponding: Frequency | Flooding: Duration | Flooding: Frequency |
|---|---|---|---|---|---|---|---|---|---|
| | | | Ft | Ft | Ft | | | | |
| 145: | | | | | | | | | |
| Las Animas, occasionally flooded | D | | | | | | | | |
| | | April | --- | --- | --- | --- | None | Brief | Occasional |
| | | May | 1.0-3.0 | >6.0 | --- | --- | None | Brief | Occasional |
| | | June | 1.0-3.0 | >6.0 | --- | --- | None | Brief | Occasional |
| | | July | 1.0-3.0 | >6.0 | --- | --- | None | Brief | Occasional |
| | | August | --- | --- | --- | --- | None | Brief | Occasional |
| | | September | --- | --- | --- | --- | None | Brief | Occasional |
| 146: | | | | | | | | | |
| Limon, rarely flooded | C | | | | | | | | |
| | | May | --- | --- | --- | --- | None | --- | Rare |
| | | June | --- | --- | --- | --- | None | --- | Rare |
| | | July | --- | --- | --- | --- | None | --- | Rare |
| | | August | --- | --- | --- | --- | None | --- | Rare |
| 147: | | | | | | | | | |
| Limon, moist, rarely flooded | C | | | | | | | | |
| | | April | --- | --- | --- | --- | None | --- | Rare |
| | | May | --- | --- | --- | --- | None | --- | Rare |
| | | June | --- | --- | --- | --- | None | --- | Rare |
| | | July | --- | --- | --- | --- | None | --- | Rare |
| | | August | --- | --- | --- | --- | None | --- | Rare |
| | | September | --- | --- | --- | --- | None | --- | Rare |
| 148: | | | | | | | | | |
| Manzanola | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 149: | | | | | | | | | |
| Manzanst, rarely flooded | C | | | | | | | | |
| | | April | --- | --- | --- | --- | None | --- | Rare |
| | | May | --- | --- | --- | --- | None | --- | Rare |
| | | June | --- | --- | --- | --- | None | --- | Rare |
| | | July | --- | --- | --- | --- | None | --- | Rare |
| | | August | --- | --- | --- | --- | None | --- | Rare |
| | | September | --- | --- | --- | --- | None | --- | Rare |
| 150: | | | | | | | | | |
| Manzanst | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 151: | | | | | | | | | |
| Midway | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 152: | | | | | | | | | |
| Midway, moist | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 153: | | | | | | | | | |
| Midway | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Razor | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 154: | | | | | | | | | |
| Midway, moist | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |

Table 21.--Water Features--Continued

| Map symbol and soil name | Hydrologic group | Month | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | Ft | Ft | Ft | | | | |
| 154: | | | | | | | | | |
| Razor, moist | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 155: | | | | | | | | | |
| Midway | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Rock outcrop | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 156: | | | | | | | | | |
| Midway, moist | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Rock outcrop, moist | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 157: | | | | | | | | | |
| Nunn | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 158: | | | | | | | | | |
| Nunn | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Sampson, rarely flooded | B | | | | | | | | |
| | | April | --- | --- | --- | --- | None | --- | Rare |
| | | May | --- | --- | --- | --- | None | --- | Rare |
| | | June | --- | --- | --- | --- | None | --- | Rare |
| | | July | --- | --- | --- | --- | None | --- | Rare |
| | | August | --- | --- | --- | --- | None | --- | Rare |
| | | September | --- | --- | --- | --- | None | --- | Rare |
| 159: | | | | | | | | | |
| Nunn, dry | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Sampson, dry, rarely flooded | B | | | | | | | | |
| | | May | --- | --- | --- | --- | None | --- | Rare |
| | | June | --- | --- | --- | --- | None | --- | Rare |
| | | July | --- | --- | --- | --- | None | --- | Rare |
| | | August | --- | --- | --- | --- | None | --- | Rare |
| 160: | | | | | | | | | |
| Olnest | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 161: | | | | | | | | | |
| Olnest | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 162: | | | | | | | | | |
| Olnest | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 163: | | | | | | | | | |
| Olnest | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |

Table 21.--Water Features--Continued

| Map symbol and soil name | Hydrologic group | Month | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | Ft | Ft | Ft | | | | |
| 164: | | | | | | | | | |
| Olney | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 165: | | | | | | | | | |
| Olney | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 166: | | | | | | | | | |
| Olney | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 167: | | | | | | | | | |
| Olney | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 168: | | | | | | | | | |
| Olney | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Midway | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 169: | | | | | | | | | |
| Otero | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 170: | | | | | | | | | |
| Oterodry | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 171: | | | | | | | | | |
| Oterodry | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 172: | | | | | | | | | |
| Platner | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 173: | | | | | | | | | |
| Platner | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Ascalon | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 174: | | | | | | | | | |
| Pleasant, rarely ponded | D | | | | | | | | |
| | | April | 0.0 | >6.0 | 0.0-2.0 | --- | Rare | --- | None |
| | | May | 0.0 | >6.0 | 0.0-2.0 | --- | Rare | --- | None |
| | | June | 0.0 | >6.0 | 0.0-2.0 | --- | Rare | --- | None |
| | | July | 0.0 | >6.0 | 0.0-2.0 | --- | Rare | --- | None |
| | | August | 0.0 | >6.0 | 0.0-2.0 | --- | Rare | --- | None |
| | | September | --- | --- | 0.0-2.0 | --- | Rare | --- | None |
| 175: | | | | | | | | | |
| Rago, rarely flooded | C | | | | | | | | |
| | | April | --- | --- | --- | --- | None | --- | Rare |
| | | May | --- | --- | --- | --- | None | --- | Rare |
| | | June | --- | --- | --- | --- | None | --- | Rare |
| | | July | --- | --- | --- | --- | None | --- | Rare |
| | | August | --- | --- | --- | --- | None | --- | Rare |
| | | September | --- | --- | --- | --- | None | --- | Rare |

Table 21.--Water Features--Continued

| Map symbol and soil name | Hydrologic group | Month | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | Ft | Ft | Ft | | | | |
| 176: | | | | | | | | | |
| Rago, dry, rarely flooded- | C | | | | | | | | |
| | | May | --- | --- | --- | --- | None | --- | Rare |
| | | June | --- | --- | --- | --- | None | --- | Rare |
| | | July | --- | --- | --- | --- | None | --- | Rare |
| | | August | --- | --- | --- | --- | None | --- | Rare |
| 177: | | | | | | | | | |
| Razor---------- | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 178: | | | | | | | | | |
| Razor, moist---------- | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 179: | | | | | | | | | |
| Sampson, rarely flooded--- | B | | | | | | | | |
| | | April | --- | --- | --- | --- | None | --- | Rare |
| | | May | --- | --- | --- | --- | None | --- | Rare |
| | | June | --- | --- | --- | --- | None | --- | Rare |
| | | July | --- | --- | --- | --- | None | --- | Rare |
| | | August | --- | --- | --- | --- | None | --- | Rare |
| | | September | --- | --- | --- | --- | None | --- | Rare |
| 180: | | | | | | | | | |
| Sampson, dry, rarely flooded---------- | B | | | | | | | | |
| | | May | --- | --- | --- | --- | None | --- | Rare |
| | | June | --- | --- | --- | --- | None | --- | Rare |
| | | July | --- | --- | --- | --- | None | --- | Rare |
| | | August | --- | --- | --- | --- | None | --- | Rare |
| 181: | | | | | | | | | |
| Satanta---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 182: | | | | | | | | | |
| Satanta, dry---------- | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 183: | | | | | | | | | |
| Seldom, rarely flooded---- | D | | | | | | | | |
| | | March | 0.5-2.0 | >6.0 | --- | --- | None | --- | None |
| | | April | 0.5-2.0 | >6.0 | --- | --- | None | --- | Rare |
| | | May | 0.5-2.0 | >6.0 | --- | --- | None | --- | Rare |
| | | June | 0.5-2.0 | >6.0 | --- | --- | None | --- | Rare |
| | | July | 0.5-2.0 | >6.0 | --- | --- | None | --- | Rare |
| | | August | --- | --- | --- | --- | None | --- | Rare |
| | | September | --- | --- | --- | --- | None | --- | Rare |
| 184: | | | | | | | | | |
| Shingle---------- | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Midway---------- | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 185: | | | | | | | | | |
| Shingle, moist---------- | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |

Table 21.--Water Features--Continued

| Map symbol and soil name | Hydrologic group | Month | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | Ft | Ft | Ft | | | | |
| 185: | | | | | | | | | |
| Midway, moist | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 186: | | | | | | | | | |
| Sundance | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 187: | | | | | | | | | |
| Table Mountain, rarely flooded | B | | | | | | | | |
| | | April | --- | --- | --- | --- | None | --- | Rare |
| | | May | --- | --- | --- | --- | None | --- | Rare |
| | | June | --- | --- | --- | --- | None | --- | Rare |
| | | July | --- | --- | --- | --- | None | --- | Rare |
| | | August | --- | --- | --- | --- | None | --- | Rare |
| | | September | --- | --- | --- | --- | None | --- | Rare |
| 188: | | | | | | | | | |
| Travessilla | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Rock outcrop | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 189: | | | | | | | | | |
| Truckton | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 190: | | | | | | | | | |
| Truckton | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 191: | | | | | | | | | |
| Truckton, dry | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 192: | | | | | | | | | |
| Truckton, dry | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 193: | | | | | | | | | |
| Valent | A | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 194: | | | | | | | | | |
| Valent | A | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Bijou | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 195: | | | | | | | | | |
| Valent | A | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Vona | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 196: | | | | | | | | | |
| Valent | A | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |

Table 21.--Water Features--Continued

| Map symbol and soil name | Hydrologic group | Month | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | Ft | Ft | Ft | | | | |
| 196: | | | | | | | | | |
| Vonid | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 197: | | | | | | | | | |
| Vona | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 198: | | | | | | | | | |
| Vona | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 199: | | | | | | | | | |
| Vona | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 200: | | | | | | | | | |
| Vona | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Karval | A | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Midway | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 201: | | | | | | | | | |
| Vona | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Midway, moist | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 202: | | | | | | | | | |
| Vona | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Seldom | D | | | | | | | | |
| | | March | 0.5-2.0 | >6.0 | --- | --- | None | --- | None |
| | | April | 0.5-2.0 | >6.0 | --- | --- | None | --- | None |
| | | May | 0.5-2.0 | >6.0 | --- | --- | None | --- | None |
| | | June | 0.5-2.0 | >6.0 | --- | --- | None | --- | None |
| | | July | 0.5-2.0 | >6.0 | --- | --- | None | --- | None |
| 203: | | | | | | | | | |
| Vonid | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 204: | | | | | | | | | |
| Vonid | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 205: | | | | | | | | | |
| Vonid | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 206: | | | | | | | | | |
| Vonid | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Karval | A | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |

Table 21.--Water Features--Continued

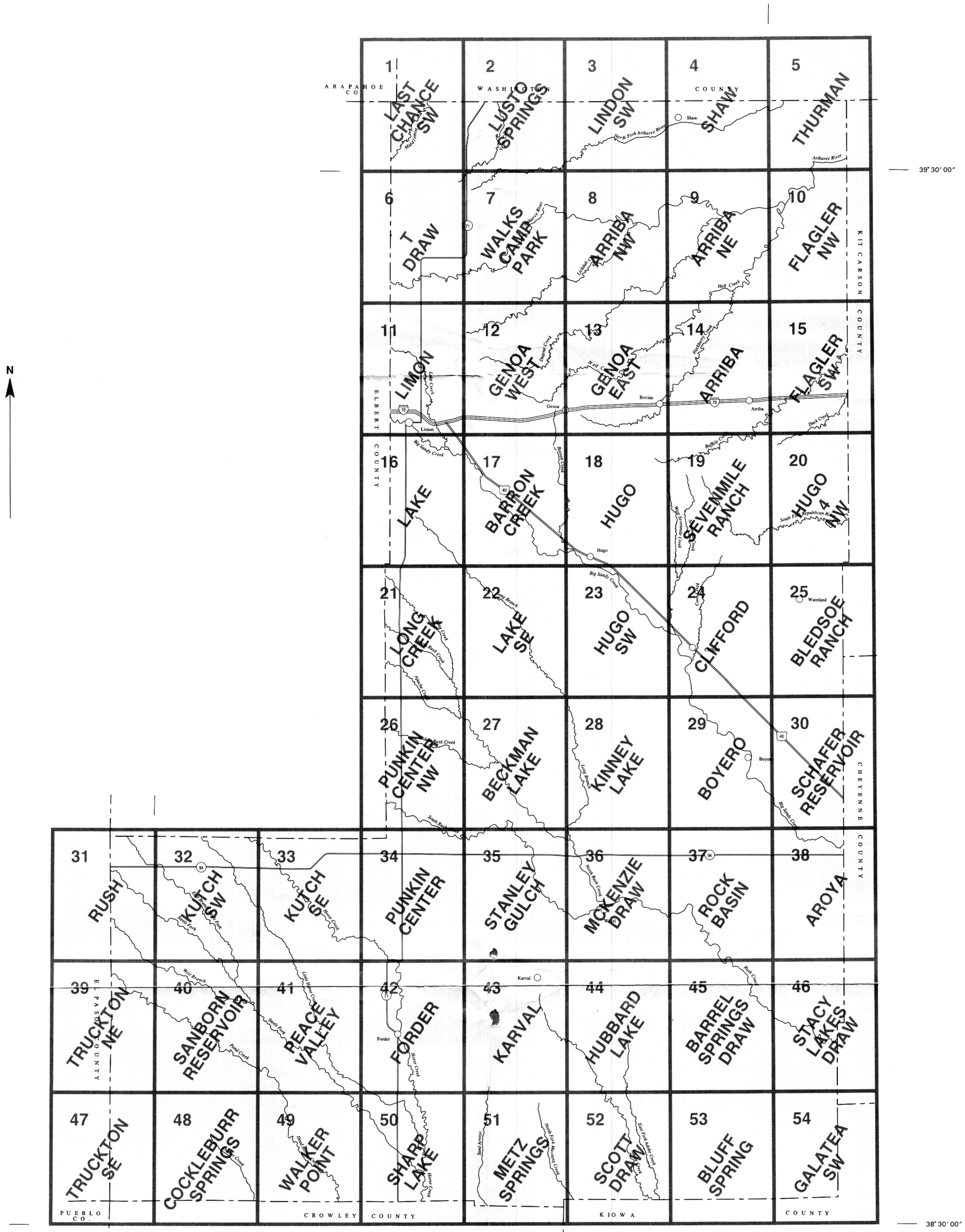
| Map symbol and soil name | Hydrologic group | Month | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | Ft | Ft | Ft | | | | |
| 206: | | | | | | | | | |
| Midway | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 207: | | | | | | | | | |
| Vonid | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Midway | D | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 208: | | | | | | | | | |
| Vonid | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Seldom | D | | | | | | | | |
| | | March | 0.5-2.0 | >6.0 | --- | --- | None | --- | None |
| | | April | 0.5-2.0 | >6.0 | --- | --- | None | --- | None |
| | | May | 0.5-2.0 | >6.0 | --- | --- | None | --- | None |
| | | June | 0.5-2.0 | >6.0 | --- | --- | None | --- | None |
| | | July | 0.5-2.0 | >6.0 | --- | --- | None | --- | None |
| 209: | | | | | | | | | |
| Wages | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 210: | | | | | | | | | |
| Wages | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 211: | | | | | | | | | |
| Wages, dry | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 212: | | | | | | | | | |
| Wages | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| Karval | A | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 213: | | | | | | | | | |
| Weld | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 214: | | | | | | | | | |
| Weld, dry | C | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 215: | | | | | | | | | |
| Wiley | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 216: | | | | | | | | | |
| Wiley | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 217: | | | | | | | | | |
| Wilid | B | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |

Table 21.--Water Features--Continued

| Map symbol and soil name | Hydrologic group | Month | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | Ft | Ft | Ft | | | | |
| 218: | | | | | | | | | |
| Water | --- | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 219: | | | | | | | | | |
| Gravel pits | A | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 220: | | | | | | | | | |
| Access denied | --- | | | | | | | | |
| | | Jan-Dec | --- | --- | --- | --- | None | --- | None |

Table 22.--Classification of the Soils

| Soil name | Family or higher taxonomic class |
|---|---|
| Apishapa | Fine, smectitic, calcareous, mesic Vertic Fluvaquents |
| Arvada | Fine, smectitic, mesic Vertic Natrargids |
| Ascalon | Fine-loamy, mixed, superactive, mesic Aridic Argiustolls |
| Bacid | Fine, smectitic, mesic Ustic Haplargids |
| Bankard | Sandy, mixed, mesic Ustic Torrifluvents |
| Bijou | Coarse-loamy, mixed, superactive, mesic Ustic Haplargids |
| Blakeland | Sandy, mixed, mesic Torriorthentic Haplustolls |
| Bresser | Fine-loamy, mixed, superactive, mesic Aridic Argiustolls |
| Campo | Fine, smectitic, mesic Vertic Paleargids |
| Canyon | Loamy, mixed, superactive, calcareous, mesic, shallow Ustic Torriorthents |
| Colby | Fine-silty, mixed, superactive, calcareous, mesic Aridic Ustorthents |
| Firstview | Fine-loamy, mixed, superactive, mesic Ustic Natrargids |
| Fort | Fine-loamy, mixed, superactive, mesic Ustic Haplargids |
| Fort Collins | Fine-loamy, mixed, superactive, mesic Aridic Haplustalfs |
| Glenberg | Coarse-loamy, mixed, superactive, calcareous, mesic Ustic Torrifluvents |
| Haversid | Fine-loamy, mixed, superactive, calcareous, mesic Ustic Torrifluvents |
| Haverson | Fine-loamy, mixed, superactive, calcareous, mesic Aridic Ustifluvents |
| Haxtun | Fine-loamy, mixed, superactive, mesic Pachic Argiustolls |
| Karval | Mixed, mesic Ustic Torripsamments |
| Keith | Fine-silty, mixed, superactive, mesic Aridic Argiustolls |
| Kim | Fine-loamy, mixed, superactive, calcareous, mesic Ustic Torriorthents |
| Kimst | Fine-loamy, mixed, superactive, calcareous, mesic Aridic Ustorthents |
| Las Animas | Coarse-loamy, mixed, superactive, calcareous, mesic Typic Fluvaquents |
| Limon | Fine, smectitic, calcareous, mesic Ustertic Torriorthents |
| Manzanola | Fine, smectitic, mesic Ustic Haplargids |
| Manzanst | Fine, smectitic, mesic Aridic Haplustalfs |
| Midway | Clayey, smectitic, calcareous, mesic, shallow Ustic Torriorthents |
| Nunn | Fine, smectitic, mesic Aridic Argiustolls |
| Olnest | Fine-loamy, mixed, superactive, mesic Aridic Haplustalfs |
| Olney | Fine-loamy, mixed, superactive, mesic Ustic Haplargids |
| Otero | Coarse-loamy, mixed, superactive, calcareous, mesic Aridic Ustorthents |
| Oterodry | Coarse-loamy, mixed, superactive, calcareous, mesic Ustic Torriorthents |
| Platner | Fine, smectitic, mesic Aridic Paleustolls |
| Pleasant | Fine, smectitic, mesic Torrertic Argiustolls |
| Rago | Fine, smectitic, mesic Pachic Argiustolls |
| Razor | Fine, smectitic, mesic Ustertic Haplocambids |
| Sampson | Fine-loamy, mixed, superactive, mesic Pachic Argiustolls |
| Satanta | Fine-loamy, mixed, superactive, mesic Aridic Argiustolls |
| Seldom | Coarse-loamy, mixed, superactive, mesic Aeric Calciaquolls |
| Shingle | Loamy, mixed, superactive, calcareous, mesic, shallow Ustic Torriorthents |
| Sundance | Fine-loamy, mixed, superactive, mesic Ustic Haplargids |
| Table Mountain | Fine-loamy, mixed, superactive, mesic Pachic Haplustolls |
| Travessilla | Loamy, mixed, superactive, calcareous, mesic Lithic Ustic Torriorthents |
| Truckton | Coarse-loamy, mixed, superactive, mesic Aridic Argiustolls |
| Valent | Mixed, mesic Ustic Torripsamments |
| Vona | Coarse-loamy, mixed, superactive, mesic Aridic Haplustalfs |
| Vonid | Coarse-loamy, mixed, superactive, mesic Ustic Calciargids |
| Wages | Fine-loamy, mixed, superactive, mesic Aridic Argiustolls |
| Weld | Fine, smectitic, mesic Aridic Argiustolls |
| Wiley | Fine-silty, mixed, superactive, mesic Aridic Haplustalfs |
| Wilid | Fine-silty, mixed, superactive, mesic Ustic Haplargids |




# INDEX TO MAP SHEETS
## LINCOLN COUNTY, COLORADO

Scale 1:253440

1 0 1 2 3
MILES

1 0 1 2 3 4 5 6
KILOMETERS

# SOIL LEGEND

Publication map unit symbols will consist of three numbers.

| SYMBOL | NAME |
|---|---|
| 101 | Apishapa clay loam, 0 to 3 percent slopes, rarely ponded |
| 102 | Arvada clay loam, 0 to 5 percent s opes |
| 103 | Ascalon sandy loam, 1 to 3 percent slopes |
| 104 | Ascalon sandy loam, 3 to 5 percent slopes |
| 105 | Ascalon sandy loam, 5 to 9 percent slopes |
| 106 | Ascalon sandy loam, dry, 1 to 3 percent slopes |
| 107 | Ascalon sandy loam, dry, 3 to 5 percent slopes |
| 108 | Ascalon sandy loam, dry, 5 to 9 percent slopes |
| 109 | Ascalon-Haxtun complex, 0 to 3 percent slopes |
| 110 | Ascalon-Haxtun complex, dry, 0 to 3 percent slopes |
| 111 | Bacid silt loam, 0 to 2 percent slopes |
| 112 | Bankard-Glenberg complex, 0 to 3 percent slopes, occasionally flooded |
| 113 | Bijou loamy sand, 1 to 3 percent slopes |
| 114 | Bijou loamy sand, moist, 1 to 3 percent slopes |
| 115 | Bijou loamy sand, moist, 3 to 12 percent slopes |
| 116 | Blakeland loamy sand, 3 to 12 percent slopes |
| 117 | Bresser sandy loam, 1 to 5 percent slopes |
| 118 | Campo silt loam, 0 to 2 percent slopes |
| 119 | Canyon-Rock outcrop complex, 5 to 60 percent s opes |
| 120 | Colby silt loam, 1 to 3 percent slopes |
| 121 | Colby silt loam, 3 to 12 percent slopes |
| 122 | Colby-Weld silt loams, 1 to 5 percent slopes |
| 123 | Firstview loamy sand, 0 to 3 percent slopes |
| 124 | Fort Collins loam, 1 to 3 percent slopes |
| 125 | Fort Collins loam, 3 to 5 percent slopes |
| 126 | Fort Collins-Karval complex, 5 to 25 percent slopes |
| 127 | Fort Collins-Platner loams, 1 to 5 percent slopes |
| 128 | Fort Collins-Razor, moist, complex, 5 to 15 percent slopes |
| 129 | Fort loam, 1 to 3 percent slopes |
| 130 | Fort loam, 3 to 5 percent slopes |
| 131 | Fort-Karval complex, 5 to 25 percent slopes |
| 132 | Fort-Razor complex, 5 to 15 percent slopes |
| 133 | Haversid silt loam, 0 to 3 percent slopes, rarely flooded |
| 134 | Haverson loam, 0 to 3 percent slopes, rarely flooded |
| 135 | Haxtun loamy sand, 0 to 3 percent s opes |
| 136 | Haxtun loamy sand, dry, 0 to 3 percent slopes |
| 137 | Haxtun, dry-Olney loamy sands, 0 to 3 percent slopes |
| 138 | Haxtun-Olnest loamy sands, 0 to 3 percent slopes |
| 139 | Keith silt loam, 1 to 3 percent slopes |
| 140 | Keith silt loam, 3 to 10 percent slopes |
| 141 | Kim loam, 1 to 3 percent slopes |
| 142 | Kim loam, 3 to 12 percent slopes |
| 143 | Kimst loam, 1 to 3 percent slopes |
| 144 | Kimst loam, 3 to 12 percent slopes |
| 145 | Las Animas sandy loam, 0 to 3 percent slopes, occasionally flooded |
| 146 | Limon clay, 0 to 3 percent slopes, rarely flooded |
| 147 | Limon clay, moist, 0 to 3 percent slopes, rarely flooded |
| 148 | Manzanola clay loam, 1 to 5 percent slopes |
| 149 | Manzanst clay loam, 0 to 3 percent s opes, rarely flooded |
| 150 | Manzanst clay loam, 1 to 5 percent slopes |
| 151 | Midway clay loam, 1 to 5 percent slopes |
| 152 | Midway clay loam, moist, 1 to 5 percent slopes |
| 153 | Midway-Razor clay loams, 5 to 15 percent slopes |
| 154 | Midway-Razor clay loams, moist, 5 to 15 percent slopes |
| 155 | Midway-Rock outcrop complex, 5 to 40 percent slopes |
| 156 | Midway-Rock outcrop complex, moist, 5 to 40 percent slopes |
| 157 | Nunn clay loam, 3 to 5 percent slopes |
| 158 | Nunn-Sampson, rarely flooded, complex, 0 to 3 percent slopes |
| 159 | Nunn-Sampson, rarely flooded, complex, dry, 0 to 3 percent slopes |
| 160 | Olnest loamy sand, 1 to 5 percent slopes |
| 161 | Olnest sandy loam, 1 to 3 percent slopes |
| 162 | Olnest sandy loam, 3 to 5 percent slopes |
| 163 | Olnest sandy loam, 5 to 12 percent slopes |
| 164 | Olney loamy sand, 1 to 5 percent slopes |
| 165 | Olney sandy loam, 1 to 3 percent slopes |
| 166 | Olney sandy loam, 3 to 5 percent slopes |
| 167 | Olney sandy loam, 5 to 12 percent slopes |
| 168 | Olney-Midway complex, 3 to 12 percent slopes |
| 169 | Otero sandy loam, 1 to 5 percent slopes |
| 170 | Oterodry fine sandy loam, 1 to 5 percent slopes |
| 171 | Oterodry fine sandy loam, 5 to 9 percent slopes |
| 172 | Platner loam, 0 to 3 percent slopes |
| 173 | Platner-Ascalon complex, 0 to 3 percent slopes |
| 174 | Pleasant loam, 0 to 1 percent slopes, rarely ponded |
| 175 | Rago silt loam, 0 to 2 percent slopes, rarely flooded |
| 176 | Rago silt loam, dry, 0 to 2 percent slopes, rarely flooded |
| 177 | Razor clay loam, 1 to 5 percent slopes |
| 178 | Razor clay loam, moist, 1 to 5 percent slopes |
| 179 | Sampson loam, 0 to 2 percent slopes, rarely flooded |
| 180 | Sampson loam, dry, 0 to 2 percent slopes, rarely flooded |
| 181 | Satanta loam, 1 to 3 percent slopes |
| 182 | Satanta loam, dry, 1 to 3 percent slopes |
| 183 | Seldom sandy loam, 0 to 3 percent slopes, rarely flooded |
| 184 | Shingle-Midway complex, 1 to 9 percent slopes |
| 185 | Shingle-Midway complex, moist, 1 to 9 percent slopes |
| 186 | Sundance loamy sand, 1 to 3 percent slopes |
| 187 | Table Mountain loam, 0 to 2 percent slopes, rarely flooded |
| 188 | Travessilla-Rock outcrop complex, 6 to 60 percent slopes |
| 189 | Truckton sandy loam, 1 to 5 percent slopes |
| 190 | Truckton sandy loam, 5 to 9 percent slopes |
| 191 | Truckton sandy loam, dry, 1 to 5 percent slopes |
| 192 | Truckton sandy loam, dry, 5 to 9 percent slopes |
| 193 | Valent sand, 3 to 20 percent slopes |
| 194 | Valent-Bijou complex, 1 to 12 percent slopes |
| 195 | Valent-Vona complex, 3 to 25 percent slopes |
| 196 | Valent-Vonid complex, 3 to 25 percent slopes |
| 197 | Vona loamy sand, 1 to 9 percent slopes |
| 198 | Vona sandy loam, 1 to 5 percent slopes |
| 199 | Vona sandy loam, 5 to 12 percent slopes |
| 200 | Vona-Karval-Midway, moist, complex, 5 to 25 percent slopes |
| 201 | Vona-Midway, moist, complex, 3 to 12 percent slopes |
| 202 | Vona-Seldom sandy loams, 3 to 25 percent slopes |
| 203 | Vonid loamy sand, 1 to 9 percent slopes |
| 204 | Vonid sandy loam, 1 to 5 percent slopes |
| 205 | Vonid sandy loam, 5 to 12 percent slopes |
| 206 | Vonid-Karval-Midway complex, 5 to 25 percent slopes |
| 207 | Vonid-Midway complex, 3 to 12 percent slopes |
| 208 | Vonid-Seldom sandy loams, 3 to 25 percent slopes |
| 209 | Wages loam, 2 to 6 percent slopes |
| 210 | Wages loam, 6 to 12 percent slopes |
| 211 | Wages loam, dry, 1 to 5 percent slopes |
| 212 | Wages-Karval complex, 6 to 15 percent slopes |
| 213 | Weld silt loam, 0 to 2 percent slopes |
| 214 | Weld silt loam, dry, 0 to 2 percent slopes |
| 215 | Wiley silt loam, 0 to 3 percent slopes |
| 216 | Wiley silt loam, 3 to 12 percent slopes |
| 217 | Wilid silt loam, 0 to 3 percent slopes |
| 218 | Water |
| 219 | Gravel pits |
| 220 | Access denied |

# CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

## CULTURAL FEATURES

BOUNDARIES

- County or parish
- Minor civil division
- Reservation (national forest or park, state forest or park, and large airport)
- Field sheet matchline and neatline

ROADS

- Divided (median shown if scale permits)
- Other roads

ROAD EMBLEM & DESIGNATIONS

- Interstate (173)
- Federal (287)
- State (52)

PITS

- Gravel pit

## WATER FEATURES

DRAINAGE

- Perennial, single line (label only)
- Intermittent (label only)
- Drainage end (label only)

DRAINAGE AND IRRIGATION

- Double-line canal (label)
- Perennial drainage and/or irrigation ditch
- Intermittent drainage and/or irrigation ditch

LAKES, PONDS AND RESERVOIRS

- Perennial water
- Miscellaneous water
- Flood pool line

MISCELLANEOUS WATER FEATURES

- Wet spot

## SPECIAL SYMBOLS FOR SOIL SURVEY

- SOIL DELINEATIONS AND SYMBOLS (173, 210)
- ESCARPMENTS
  - Other than bedrock (points down slope)
- GULLY
- DEPRESSION, closed
- MISCELLANEOUS
  - Blowout
  - Gravelly spot
  - Rock outcrop (includes sandstone and shale)
  - Saline spot
  - Sandy spot
  - Severely eroded spot
  - Sodic spot

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
LAST CHANCE SW QUADRANGLE
SHEET NUMBER 1 OF 54

103°45′00″ | 103°42′30″ | 103°40′00″ | 103°37′30″

R. 57 W. R. 56 W.

39°37′30″ | 39°35′00″ | 39°32′30″ | 39°30′00″

T. 5 S.
T. 6 S.

ARAPAHOE COUNTY | WASHINGTON COUNTY | ELBERT COUNTY

Joins sheet 2, Lusto Springs

Joins sheet 6, T Draw

Joins sheet 7, Walks Camp Park

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1993-1994 aerial photography. Hydrography, culture, and public land survey system (PLSS) information were acquired from U.S. Geological Survey.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

LAST CHANCE SW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 1 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
LUSTO SPRINGS QUADRANGLE
SHEET NUMBER 2 OF 54

103°37′30″ R. 56 W. R. 55 W. 103°35′00″ 103°32′30″ 103°30′00″

39°37′30″ 39°35′00″ 39°32′30″ 39°30′00″

T. 5 S.
T. 6 S.

WASHINGTON COUNTY

Joins sheet 1, Last Chance SW

Joins sheet 3, Lindon SW

Joins sheet 6, T Draw

Joins sheet 7, Walks Camp Park

Joins sheet 8, Arriba NW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

LUSTO SPRINGS, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 2 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
LINDON SW QUADRANGLE
SHEET NUMBER 3 OF 54

103°30′00″ R. 55 W. R. 54 W. 103°27′30″ 103°25′00″ 103°22′30″

39°37′30″ 39°35′00″ 39°32′30″ 39°30′00″

T. 5 S.
T. 6 S.

WASHINGTON COUNTY

Joins sheet 2, Lusto Springs

Joins sheet 4, Shaw

Joins sheet 7, Walks Camp Park

Joins sheet 8, Arriba NW

Joins sheet 9, Arriba NE

Arikaree River

North Fork Arikaree River

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

LINDON SW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 3 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
SHAW QUADRANGLE
SHEET NUMBER 4 OF 54

103°22′30″ R. 54 W. R. 53 W. — 103°20′00″ — 103°17′30″ — 103°15′00″ R. 53 W. R. 52 W.

39°37′30″ — 39°35′00″ — T. 5 S. — T. 6 S. — 39°32′30″ — 39°30′00″

WASHINGTON COUNTY

Joins sheet 3, Lindon SW

Joins sheet 5, Thurman

Joins sheet 8, Arriba NW

Joins sheet 9, Arriba NE

Joins sheet 10, Flagler NW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

SHAW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 4 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
THURMAN QUADRANGLE
SHEET NUMBER 5 OF 54

103°15′00″ 103°12′30″ 103°10′00″ R. 52 W. R. 51 W. 103°07′30″

39°37′30″ 39°35′00″ 39°32′30″ 39°30′00″

T. 5 S.
T. 6 S.

WASHINGTON COUNTY

KIT CARSON COUNTY

Arikaree River

North Fork Arikaree River

Joins sheet 4, Shaw

Joins sheet 10, Flagler NW

Joins sheet 9, Arriba NE

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

MILES

1000 0 1000 2000 3000 4000 5000 6000 7000

FEET

KILOMETERS

QUADRANGLE LOCATION

THURMAN, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 5 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
T DRAW QUADRANGLE
SHEET NUMBER 6 OF 54

Joins sheet 2, Lusto Springs

103° 45′ 00″ — 103° 42′ 30″ — 103° 40′ 00″ — 103° 37′ 30″

Joins sheet 1, Last Chance SW

R. 57 W. R. 56 W.

39° 30′ 00″ — 39° 27′ 30″ — 39° 25′ 00″ — 39° 22′ 30″

T. 6 S.
T. 7 S.
T. 8 S.

ELBERT COUNTY

Arikaree River

Vega Creek

Joins sheet 7, Walks Camp Park

Joins sheet 11, Limon

Joins sheet 12, Genoa West

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

T DRAW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 6 OF 54

Joins sheet 1, Last Chance SW

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 2, Lusto Springs

LINCOLN COUNTY, COLORADO
WALKS CAMP PARK QUADRANGLE
SHEET NUMBER 7 OF 54

Joins sheet 3, Limon SW

103°37′30″ 103°35′00″ 103°32′30″ 103°30′00″

R. 56 W. R. 55 W.

39°30′00″ 39°27′30″ 39°25′00″ 39°22′30″

T. 6 S.
T. 7 S.
T. 7 S.
T. 8 S.

Joins sheet 6, T Draw

Joins sheet 8, Arriba NW

Joins sheet 11, Limon

Joins sheet 12, Genoa West

Joins sheet 13, Genoa East

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

WALKS CAMP PARK, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 7 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
ARRIBA NW QUADRANGLE
SHEET NUMBER 8 OF 54



103°30′00″ 103°27′30″ Joins sheet 3, Lindon SW 103°25′00″ 103°22′30″

R. 55 W. R. 54 W. R. 54 W. R. 53 W.

39°30′00″

T. 6 S.
T. 7 S.

39°27′30″

T. 7 S.
T. 8 S.

39°25′00″

39°22′30″





Aritkaree River
Currie Creek
Liebdob Creek
Dugout Creek







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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

ARRIBA NW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 8 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



LINCOLN COUNTY, COLORADO
ARRIBA NE QUADRANGLE
SHEET NUMBER 9 OF 54



103°22′30″ 103°20′00″ 103°17′30″ R. 53 W. R. 52 W. 103°15′00″

39°30′00″ 39°27′30″ 39°25′00″ 39°22′30″

T. 6 S.
T. 7 S.
T. 7 S.
T. 8 S.

Arikaree River
Arikaree River
Duggal Creek
Creek
Creek

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
FLAGLER NW QUADRANGLE
SHEET NUMBER 10 OF 54

Joins sheet 5, Thurman

103°15′00″ 103°12′30″ 103°10′00″ R. 52 W. R. 51 W. 103°07′30″

39°30′00″ 39°27′30″ 39°25′00″ 39°22′30″

T. 6 S.
T. 7 S.
T. 7 S.
T. 8 S.

Arikaree River
Arikaree Creek
Rush Creek
KIT CARSON COUNTY

Joins sheet 9, Arriba NE

Joins sheet 14, Arriba

Joins sheet 15, Flagler SW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

FLAGLER NW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 10 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
LIMON QUADRANGLE
SHEET NUMBER 11 OF 54

Joins sheet 6, T Draw

Joins sheet 7, Walks Camp Park

103° 45′ 00″ — R. 57 W. — R. 56 W. — 103° 42′ 30″ — 103° 40′ 00″ — 103° 37′ 30″

39° 22′ 30″ — 39° 20′ 00″ — T. 8 S. / T. 9 S. — 39° 17′ 30″ — 39° 15′ 00″

ELBERT COUNTY

Limon

Creek

RAILROAD

Joins sheet 12, Genoa West

Joins sheet 16, Lake

Joins sheet 17, Barron Creek

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

LIMON, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 11 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



LINCOLN COUNTY, COLORADO
GENOA WEST QUADRANGLE
SHEET NUMBER 12 OF 54



103°37′30″ R. 56 W. R. 55 W. 103°35′00″ 103°32′30″ 103°30′00″

39°22′30″ 39°20′00″ 39°17′30″ 39°15′00″

Joins sheet 11, Limon

Joins sheet 13, Genoa East

T. 8 S.
T. 9 S.

Lickdab Creek
Du gout Creek
Hell Creek
Genoa
RAILROAD
70
24

Joins sheet 16, Lake

Joins sheet 17, Barron Creek

Joins sheet 16, Hugo

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

GENOA WEST, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 12 OF 54

Joins sheet 7, Watts Camp Park

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
GENOA EAST QUADRANGLE
SHEET NUMBER 13 OF 54

Joins sheet 9, Arriba NE

103° 30′ 00″ — 103° 27′ 30″ — 103° 25′ 00″ — 103° 22′ 30″

R. 55 W. — R. 54 W. — R. 54 W. — R. 53 W.

39° 22′ 30″ — 39° 20′ 00″ — 39° 17′ 30″ — 39° 15′ 00″

Joins sheet 8, Arriba NW

Joins sheet 12, Genoa West

Joins sheet 14, Arriba

T. 8 S.
T. 9 S.

Creek
Dugout
Hell
Creek
Hell
Creek
Hackberry
Creek

RAILROAD
70
24
Bovina

Joins sheet 17, Barron Creek

Joins sheet 18, Hugo

Joins sheet 19, Sevenmile Ranch

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

GENOA EAST, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 13 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
ARRIBA QUADRANGLE
SHEET NUMBER 14 OF 54

Joins sheet 18, Arriba NW

Joins sheet 9, Arriba NE

Joins sheet 10, Flagler NW

103°22′30″ 103°20′00″ 103°17′30″ R. 53 W. R. 52 W. 103°15′00″

39°22′30″ 39°20′00″ 39°17′30″ 39°15′00″

Joins sheet 13, Genoa East

Joins sheet 15, Flagler SW

T. 8 S.
T. 9 S.

Creek
Heli
Hackberry
Buffalo
RAILROAD
Arriba

Joins sheet 19, Sevenmile Ranch

Joins sheet 18, Hugo

Joins sheet 20, Hugo 4 NW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000
FEET
1 0 1
KILOMETERS

QUADRANGLE LOCATION

ARRIBA, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 14 OF 54

Joins sheet 9, Arriba NE

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
FLAGLER SW QUADRANGLE
SHEET NUMBER 15 OF 54

Joins sheet 10, Flagler NW

103°15′00″ 103°12′30″ 103°10′00″ R. 52 W. R. 51 W. 103°07′30″

39°22′30″ 39°20′00″ 39°17′30″ 39°15′00″

T. 8 S.
T. 9 S.

Joins sheet 14, Arriba

Joins sheet 20, Hugo 4 NW

Joins sheet 19, Sevenmile Ranch

KIT CARSON COUNTY

Buffalo Creek

RAILROAD

24 70

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

FLAGLER SW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 15 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
LAKE QUADRANGLE
SHEET NUMBER 16 OF 54

Joins sheet 11, Limon

Joins sheet 12, Genoa West

103°45′00″ R. 57 W. R. 56 W. 103°42′30″ 103°40′00″ 103°37′30″

39°15′00″ 39°12′30″ 39°10′00″ 39°07′30″

T. 9 S.
T. 10 S.
T. 11 S.

ELBERT COUNTY

Four Corners

Big Sandy Creek

Lake

RAILROAD

Long Branch

Joins sheet 17, Barron Creek

Joins sheet 21, Long Creek

Joins sheet 22, Lake SE

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

LAKE, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 16 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



LINCOLN COUNTY, COLORADO
BARRON CREEK QUADRANGLE
SHEET NUMBER 17 OF 54






Joins sheet 16, Lake

Joins sheet 18, Hugo

Joins sheet 22, Lake SE

Joins sheet 21, Long Creek

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

MILES

1000 0 1000 2000 3000 4000 5000 6000 7000

FEET

KILOMETERS

QUADRANGLE LOCATION

Joins sheet 23, Hugo SW

BARRON CREEK, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 17 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

# LINCOLN COUNTY, COLORADO
# HUGO QUADRANGLE
# SHEET NUMBER 18 OF 54

Joins sheet 12, Genoa West

Joins sheet 13, Genoa East

Joins sheet 14, Arriba

103°30′00″ — 103°27′30″ — 103°25′00″ — 103°22′30″

R. 55 W. R. 54 W. — R. 54 W. R. 53 W.

39°15′00″

T. 9 S.
T. 10 S.

39°12′30″

Joins sheet 17, Barron Creek

Joins sheet 19, Sevenmile Ranch

39°10′00″

T. 10 S.
T. 11 S.

39°07′30″

Joins sheet 22, Lake SE

Joins sheet 23, Hugo SW

Joins sheet 24, Clifford

Barron Creek

Big Barron Creek

RAILROAD

Hugo

40 287

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NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

HUGO, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 18 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 14, Arriba

LINCOLN COUNTY, COLORADO
SEVENMILE RANCH QUADRANGLE
SHEET NUMBER 19 OF 54



103°22′30″ 103°20′00″ 103°17′30″ R. 53 W. R. 52 W. 103°15′00″

39°15′00″ T. 9 S. T. 10 S. 39°12′30″ 39°10′00″ 39°07′30″ T. 10 S. T. 11 S.

Joins sheet 18, Hugo

Joins sheet 20, Hugo 4 NW

Joins sheet 23, Hugo SW

Joins sheet 24, Clifford

Joins sheet 25, Bledsoe Ranch

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

MILES

FEET

KILOMETERS

QUADRANGLE LOCATION

SEVENMILE RANCH, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 19 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



LINCOLN COUNTY, COLORADO
HUGO 4 NW QUADRANGLE
SHEET NUMBER 20 OF 54

103°15′00″ 103°12′30″ 103°10′00″ R. 52 W. R. 51 W. 103°07′30″

39°15′00″ 39°12′30″ 39°10′00″ 39°07′30″

T. 9 S.
T. 10 S.
T. 10 S.
T. 11 S.

Duck Creek
South Fork Republican River
KIT CARSON COUNTY

Joins sheet 19, Sevenmile Ranch

Joins sheet 24, Clifford

Joins sheet 25, Bledsoe Ranch

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

HUGO 4 NW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 20 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
LONG CREEK QUADRANGLE
SHEET NUMBER 21 OF 54

Joins sheet 16, Lake
Joins sheet 17, Barron Creek
Joins sheet 22, Lake SE
Joins sheet 26, Punkin Center NW
Joins sheet 27, Beckman Lake

103°45′00″ R. 57 W. R. 56 W. 103°42′30″ 103°40′00″ 103°37′30″

39°07′30″ 39°05′00″ 39°02′30″ T. 11 S. T. 12 S. 39°00′00″

ELBERT COUNTY

Lake Creek

North Rush Creek

Rush Creek

Apishapa Creek

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

LONG CREEK, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 21 OF 54

103° 37′ 30″ R. 56 W. R. 55 W. 103° 35′ 00″ 103° 32′ 30″ 103° 30′ 00″

39° 07′ 30″ 39° 05′ 00″ 39° 02′ 30″ 39° 00′ 00″

T. 11 S.
T. 12 S.

Joins sheet 21, Long Creek

Joins sheet 23, Hugo SW

Joins sheet 26, Punkin Center NW

Joins sheet 27, Beckman Lake

Joins sheet 28, Kinney Lake

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

LAKE SE, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 22 OF 54

Joins sheet 17, Barron Creek

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
HUGO SW QUADRANGLE
SHEET NUMBER 23 OF 54

Joins sheet 19, Sevenmile Ranch

Joins sheet 18, Hugo

103°30′00″ R. 55 W. R. 54 W. | 103°27′30″ | 103°25′00″ | R. 54 W. R. 53 W. 103°22′30″

39°07′30″

39°05′00″

39°02′30″

T. 11 S.
T. 12 S.

39°00′00″

R. 55 W. R. 54 W. 103°30′00″ | 103°27′30″ | 103°25′00″ | R. 54 W. R. 53 W. 103°22′30″

Joins sheet 22, Lake SE

Joins sheet 24, Clifford

Joins sheet 28, Kinney Lake

Joins sheet 27, Beckman Lake

Joins sheet 29, Boyero

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

HUGO SW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 23 OF 54

Joins sheet 18, Hugo

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 19, Sevenmile Ranch

LINCOLN COUNTY, COLORADO
CLIFFORD QUADRANGLE
SHEET NUMBER 24 OF 54

Joins sheet 20, Hugo 4 NW

103°22′30″ 103°20′00″ 103°17′30″ R. 53 W. R. 52 W. 103°15′00″

39°07′30″ 39°05′00″ 39°02′30″ 39°00′00″

Joins sheet 23, Hugo SW

Joins sheet 25, Bledsoe Ranch

T. 11 S.
T. 12 S.

Sevenmile Creek
Creek
Cedar Creek
Clifford
RAILROAD
40
287

Joins sheet 28, Kinney Lake

Joins sheet 29, Boyero

Joins sheet 30, Schafer Reservoir

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

MILES

FEET

KILOMETERS

QUADRANGLE LOCATION

CLIFFORD, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 24 OF 54

Joins sheet 19, Sevenmile Ranch

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
BLEDSOE RANCH QUADRANGLE
SHEET NUMBER 25 OF 54

Joins sheet 20, Hugo 4 NW

103°15′00″ 103°12′30″ 103°10′00″ 103°07′30″

R. 52 W. R. 51 W.

39°07′30″ 39°05′00″ 39°02′30″ 39°00′00″

T. 11 S.
T. 12 S.

Joins sheet 24, Clifford

Joins sheet 29, Boyero

Joins sheet 30, Schafer Reservoir

CHEYENNE COUNTY

LINCOLN COUNTY

Creek

Sand

Gulch

Folger Gulch

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

BLEDSOE RANCH, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 25 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
PUNKIN CENTER NW QUADRANGLE
SHEET NUMBER 26 OF 54

Joins sheet 21, Long Creek
Joins sheet 22, Lake SE
Joins sheet 27, Beckman Lake
Joins sheet 33, Kutch SE
Joins sheet 34, Punkin Center
Joins sheet 35, Stanley Gulch

103°45′00″ R. 57 W. R. 56 W. 103°42′30″ 103°40′00″ 103°37′30″

39°00′00″ 38°57′30″ T. 12 S. T. 13 S. 38°55′00″ 38°52′30″

ELBERT COUNTY

Apache Creek
North Rush Creek
Middle Rush Creek
South Rush Creek
Muddy Creek

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

PUNKIN CENTER NW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 26 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
BECKMAN LAKE QUADRANGLE
SHEET NUMBER 27 OF 54



Joins sheet 22, Lake SE

103°37′30″ R. 56 W. R. 55 W. 103°35′00″ 103°32′30″ 103°30′00″

39°00′00″

38°57′30″

T. 12 S.
T. 13 S.

38°55′00″

38°52′30″

Joins sheet 26, Punkin Center NW

Joins sheet 28, Kinney Lake

North Rush Creek
Middle Rush Creek
South Rush Creek
North Rush Creek
Rush Creek
Beckman Lake

Joins sheet 34, Punkin Center

Joins sheet 35, Stanley Gulch

Joins sheet 36, Mckenzie Draw

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

BECKMAN LAKE, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 27 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
KINNEY LAKE QUADRANGLE
SHEET NUMBER 28 OF 54



103°30′00″ R. 55 W. R. 54 W. — 103°27′30″ — Joins sheet 23, Hugo SW — 103°25′00″ — 103°22′30″ R. 54 W. R. 53 W.

39°00′00″ — 38°57′30″ — T. 12 S. T. 13 S. — 38°55′00″ — 38°52′30″

Joins sheet 27, Beckman Lake

Joins sheet 29, Boyero

Joins sheet 35, Stanley Gulch

Joins sheet 36, McKenzie Draw

Joins sheet 37, Rock Basin

Kinney Lake
Nelson Lake
Lone Branch
Buffalo Basin

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

MILES: 1 0 1

FEET: 1000 0 1000 2000 3000 4000 5000 6000 7000

KILOMETERS: 1 0 1

QUADRANGLE LOCATION

KINNEY LAKE, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 28 OF 54

103°22′30″ 103°20′00″ 103°17′30″ R. 53 W. R. 52 W. 103°15′00″

39°00′00″ 38°57′30″ T. 12 S. T. 13 S. 38°55′00″ 38°52′30″




Joins sheet 28, Kinney Lake

Joins sheet 30, Schafer Reservoir

Joins sheet 36, McKenzie Draw

Joins sheet 37, Rock Basin

Joins sheet 38, Arroya

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

BOYERO, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 29 OF 54

Joins sheet 24, Clifford

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
SCHAFER RESERVOIR QUADRANGLE
SHEET NUMBER 30 OF 54

Joins sheet 25, Bledsoe Ranch

103°15′00″ 103°12′30″ 103°10′00″ 103°07′30″

39°00′00″ 38°57′30″ 38°55′00″ 38°52′30″

R. 52 W. R. 51 W.

T. 12 S.
T. 13 S.

CHEYENNE COUNTY

Joins sheet 29, Boyero

Joins sheet 37, Rock Basin

Joins sheet 38, Aroya

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1993-1994 aerial photography. Hydrography, culture, and public land survey system (PLSS) information were acquired from U.S. Geological Survey.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS



QUADRANGLE LOCATION

SCHAFER RESERVOIR, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 30 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
RUSH QUADRANGLE
SHEET NUMBER 31 OF 54

104°07'30" 104°05'00" R. 60 W. R. 59 W. 104°02'30" 104°00'00"

38°52'30" T. 13 S. T. 14 S.

ELBERT COUNTY

EL PASO COUNTY

38°50'00"

38°47'30" T. 14 S. T. 15 S.

38°45'00"

104°07'30" 104°05'00" R. 60 W. R. 59 W. 104°02'30" 104°00'00"

*Joins sheet 32, Kutch SW*

*Joins sheet 39, Truckton NE*

*Joins sheet 40, Sanborn Reservoir*

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

RUSH, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 31 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
KUTCH SW QUADRANGLE
SHEET NUMBER 32 OF 54

104°00′00″ 103°57′30″ R. 59 W. R. 58 W. 103°55′00″ 103°52′30″

38°52′30″ T. 13 S. T. 14 S.

ELBERT COUNTY

38°50′00″

38°47′30″

T. 14 S. T. 15 S.

38°45′00″

Joins sheet 31, Rush

Joins sheet 33, Kutch SE

Joins sheet 39, Truckton NE

Joins sheet 40, Sanborn Reservoir

Joins sheet 41, Peace Valley

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1993-1994 aerial photography. Hydrography, culture, and public land survey system (PLSS) information were acquired from U.S. Geological Survey.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

MILES

1000 0 1000 2000 3000 4000 5000 6000 7000

FEET

KILOMETERS

QUADRANGLE LOCATION

KUTCH SW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 32 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
KUTCH SE QUADRANGLE
SHEET NUMBER 33 OF 54

Joins sheet 26, Punkin Center NW

103°52'30" 103°50'00" R. 58 W. R. 57 W. 103°47'30" 103°45'00"

38°52'30" T. 13 S. T. 14 S.

ELBERT COUNTY

Skull Creek
Lone Tree Creek
Hall Station
Horse Creek
Little Horse Creek
Parts Draw

38°50'00"

38°47'30"

38°45'00"

Joins sheet 32, Kutch SW

Joins sheet 34, Punkin Center

Joins sheet 40, Sanborn Reservoir

Joins sheet 41, Peace Valley

Joins sheet 42, Forder

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

KUTCH SE, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 33 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
PUNKIN CENTER QUADRANGLE
SHEET NUMBER 34 OF 54

Joins sheet 27, Beckman Lake

Joins sheet 26, Punkin Center NW

103°45'00" R. 57 W. R. 56 W. 103°42'30" 103°40'00" 103°37'30"

38°52'30"

T. 13 S.
T. 14 S.

ELBERT COUNTY

Punkin Center

South Rush Creek

38°50'00"

38°47'30"

T. 14 S.
T. 15 S.

Horse Creek

38°45'00"

103°45'00" R. 57 W. R. 56 W. 103°42'30" 103°40'00" 103°37'30"

Joins sheet 33, Kutch SE

Joins sheet 35, Stanley Gulch

Joins sheet 41, Peace Valley

Joins sheet 42, Forder

Joins sheet 43, Karval

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

MILES

1000 0 1000 2000 3000 4000 5000 6000 7000

FEET

KILOMETERS

QUADRANGLE LOCATION

PUNKIN CENTER, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 34 OF 54

Joins sheet 26, Punkin Center NW

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 27, Beckman Lake

LINCOLN COUNTY, COLORADO
STANLEY GULCH QUADRANGLE
SHEET NUMBER 35 OF 54

Joins sheet 28, Kinney Lake

103°37′30″ R. 56 W. R. 55 W. 103°35′00″ 103°32′30″ 103°30′00″

38°52′30″

T. 13 S.
T. 14 S.

38°50′00″

38°47′30″

T. 14 S.
T. 15 S.

38°45′00″

Joins sheet 34, Punkin Center

Joins sheet 36, McKenzie Draw

Joins sheet 42, Forder

Joins sheet 43, Karval

Joins sheet 44, Hubbard Lake

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

STANLEY GULCH, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 35 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

# LINCOLN COUNTY, COLORADO
# MCKENZIE DRAW QUADRANGLE
# SHEET NUMBER 36 OF 54



103°30′00″ R. 55 W. R. 54 W. — 103°27′30″ — 103°25′00″ — R. 54 W. R. 53 W. 103°22′30″

38°52′30″ — T. 13 S. T. 14 S.

38°50′00″

38°47′30″

38°45′00″

Joins sheet 28, Kinney Lake

Joins sheet 35, Stanley Gulch

Joins sheet 37, Rock Basin

Joins sheet 43, Karval

Joins sheet 44, Hubbard Lake

Joins sheet 45, Bartel Springs Draw

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

MCKENZIE DRAW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 36 OF 54

Joins sheet 28, Kinney Lake

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 29, Boyero

LINCOLN COUNTY, COLORADO
ROCK BASIN QUADRANGLE
SHEET NUMBER 37 OF 54

Joins sheet 30, Schafer Reservoir

103°22′30″ 103°20′00″ 103°17′30″ R. 53 W. R. 52 W. 103°15′00″

38°52′30″

T. 13 S.
T. 14 S.

38°50′00″

38°47′30″

T. 14 S.
T. 15 S.

38°45′00″

BUFFALO BASIN

Rush Creek

ROCK BASIN

Joins sheet 36, McKenzie Draw

Joins sheet 38, Anoya

Joins sheet 44, Hubbard Lake

Joins sheet 45, Barrel Springs Draw

Joins sheet 46, Stacy Lakes Draw

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

ROCK BASIN, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 37 OF 54

Joins sheet 29, Boyero

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
AROYA QUADRANGLE
SHEET NUMBER 38 OF 54

Joins sheet 30, Schafer Reservoir

103°15′00″ 103°12′30″ 103°10′00″ 103°07′30″

R. 52 W. R. 51 W.

38°52′30″ 38°50′00″ 38°47′30″ 38°45′00″

T. 13 S.
T. 14 S.
T. 15 S.

Fourmile Gulch

RAILROAD

CHEYENNE COUNTY

Joins sheet 37, Rock Basin

Joins sheet 45, Barrel Springs Draw

Joins sheet 46, Stacy Lakes Draw

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

AROYA, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 38 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
TRUCKTON NE QUADRANGLE
SHEET NUMBER 39 OF 54

Joins sheet 31, Rush

Joins sheet 32, Kutch SW

104° 07′ 30″ | 104° 05′ 00″ | R. 60 W. | R. 59 W. | 104° 02′ 30″ | 104° 00′ 00″

38° 45′ 00″

38° 42′ 30″

T. 15 S
T. 16 S

T. 15 S.
T. 16 S.

38° 40′ 00″

38° 37′ 30″

EL PASO COUNTY

Pond

Creek

Joins sheet 40, Sanborn Reservoir

Joins sheet 47, Truckton SE

Joins sheet 48, Cockerhurst Springs

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

TRUCKTON NE, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 39 OF 54

104°00′00″ 103°57′30″ R. 59 W. R. 58 W. 103°55′00″ 103°52′30″

38°45′00″ 38°42′30″ T. 15 S. T. 16 S. 38°40′00″ 38°37′30″

Joins sheet 39, Truckton NE

Joins sheet 41, Peace Valley

Joins sheet 47, Truckton SE

Joins sheet 48, Cockleburr Springs

Joins sheet 49, Walker Point

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1993-1994 aerial photography. Hydrography, culture, and public land survey system (PLSS) information were acquired from U.S. Geological Survey.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

SANBORN RESERVOIR, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 40 OF 54

Joins sheet 32, Kutch SW

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
PEACE VALLEY QUADRANGLE
SHEET NUMBER 41 OF 54

Joins sheet 33, Kutch SE
Joins sheet 34, Punkin Center

103°52′30″ 103°50′00″ 103°47′30″ 103°45′00″

R. 58 W. R. 57 W.

38°45′00″ 38°42′30″ 38°40′00″ 38°37′30″

T. 15 S.
T. 16 S.

Joins sheet 40, Sanborn Reservoir
Joins sheet 42, Forder
Joins sheet 48, Cockleburr Springs
Joins sheet 49, Walker Point
Joins sheet 50, Sharp Lake

Pats Draw
Little Beaver
Seldom Seen Ridge
Horse Draw
Steels Fork
NINEMILE FLATS
Dead Horse Creek
Little Beaver Creek
Horse Creek
Steels Fork
PEACE VALLEY

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

MILES 1 0 1

FEET 1000 0 1000 2000 3000 4000 5000 6000 7000

KILOMETERS 1 0 1

QUADRANGLE LOCATION

PEACE VALLEY, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 41 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

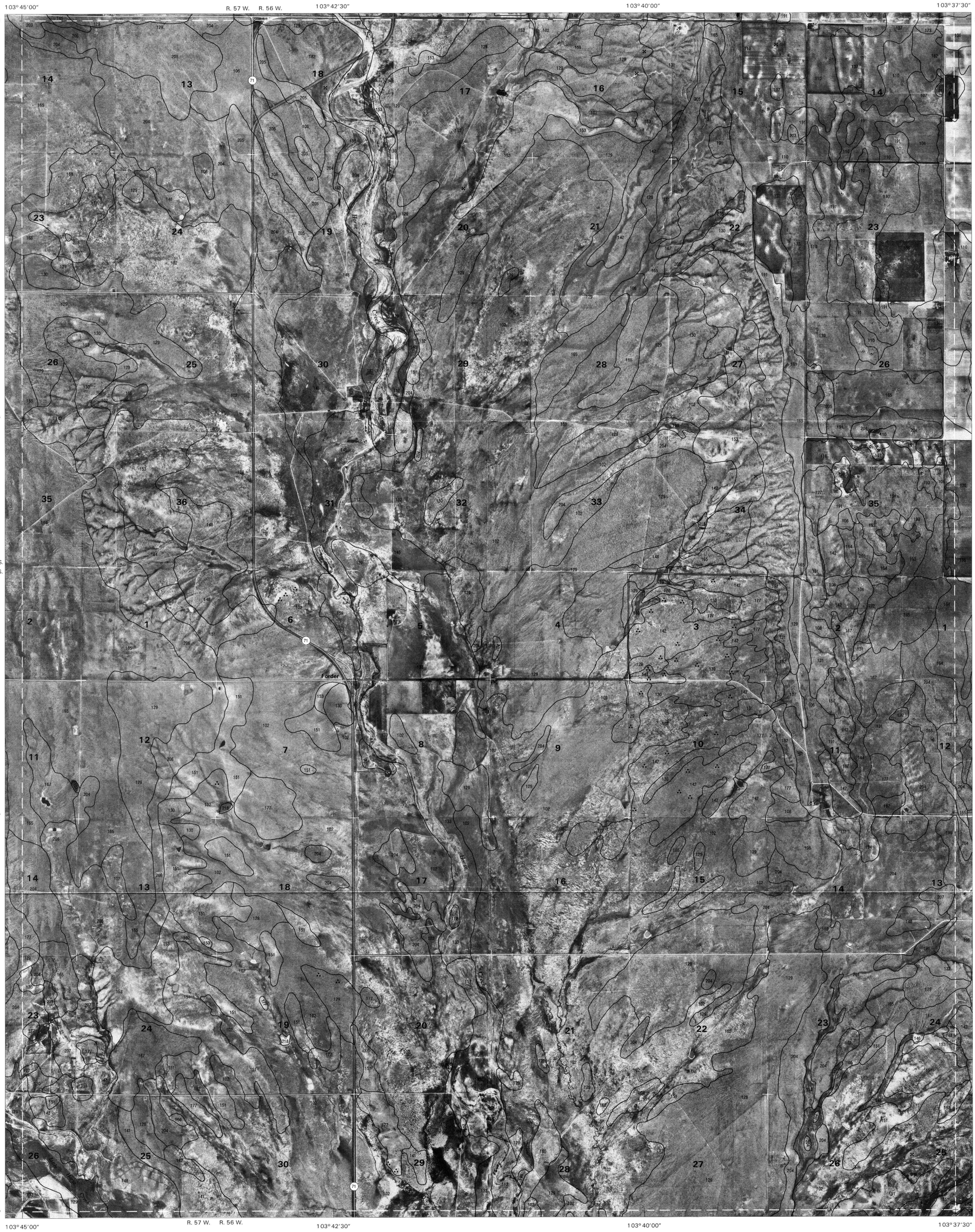
LINCOLN COUNTY, COLORADO
FORDER QUADRANGLE
SHEET NUMBER 42 OF 54



Joins sheet 34, Punkin Center

103°45′00″ R. 57 W. R. 56 W. 103°42′30″ 103°40′00″ 103°37′30″

38°45′00″ 38°42′30″ T. 15 S. T. 16 S. 38°40′00″ 38°37′30″




Joins sheet 41, Peace Valley

Joins sheet 43, Karval

Joins sheet 49, Walker Point

Joins sheet 50, Sharp Lake

Joins sheet 51, Metz Springs

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

FORDER, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 42 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
KARVAL QUADRANGLE
SHEET NUMBER 43 OF 54





103°37′30″ R. 56 W. R. 55 W. 103°35′00″ 103°32′30″ 103°30′00″

38°45′00″ 38°42′30″ T. 15 S. T. 16 S. 38°40′00″ 38°37′30″




Joins sheet 42, Forder

Joins sheet 44, Hubbard Lake

R. 56 W. R. 55 W. 103°37′30″ 103°35′00″ 103°32′30″ R. 55 W. R. 54 W. 103°30′00″

Joins sheet 51, Metz Springs

Joins sheet 50, Sharp Lake

Joins sheet 52, Scott Draw

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

KARVAL, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 43 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
HUBBARD LAKE QUADRANGLE
SHEET NUMBER 44 OF 54

Joins sheet 35, Stephen Gulch

Joins sheet 36, McKenzie Draw

Joins sheet 37, Rock Basin

103°30'00" R.55 W. R. 54 W.
103°27'30"
103°25'00"
103°22'30" R. 54 W. R. 53 W.

38°45'00"
38°42'30"
T. 15 S.
T. 16 S.
38°40'00"
38°37'30"

Joins sheet 43, Karval

Joins sheet 45, Barrel Springs Draw

Joins sheet 51, Metz Springs

Joins sheet 52, Scott Draw

Joins sheet 53, Bluff Spring

Hubbard Lake

Adobe Creek

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

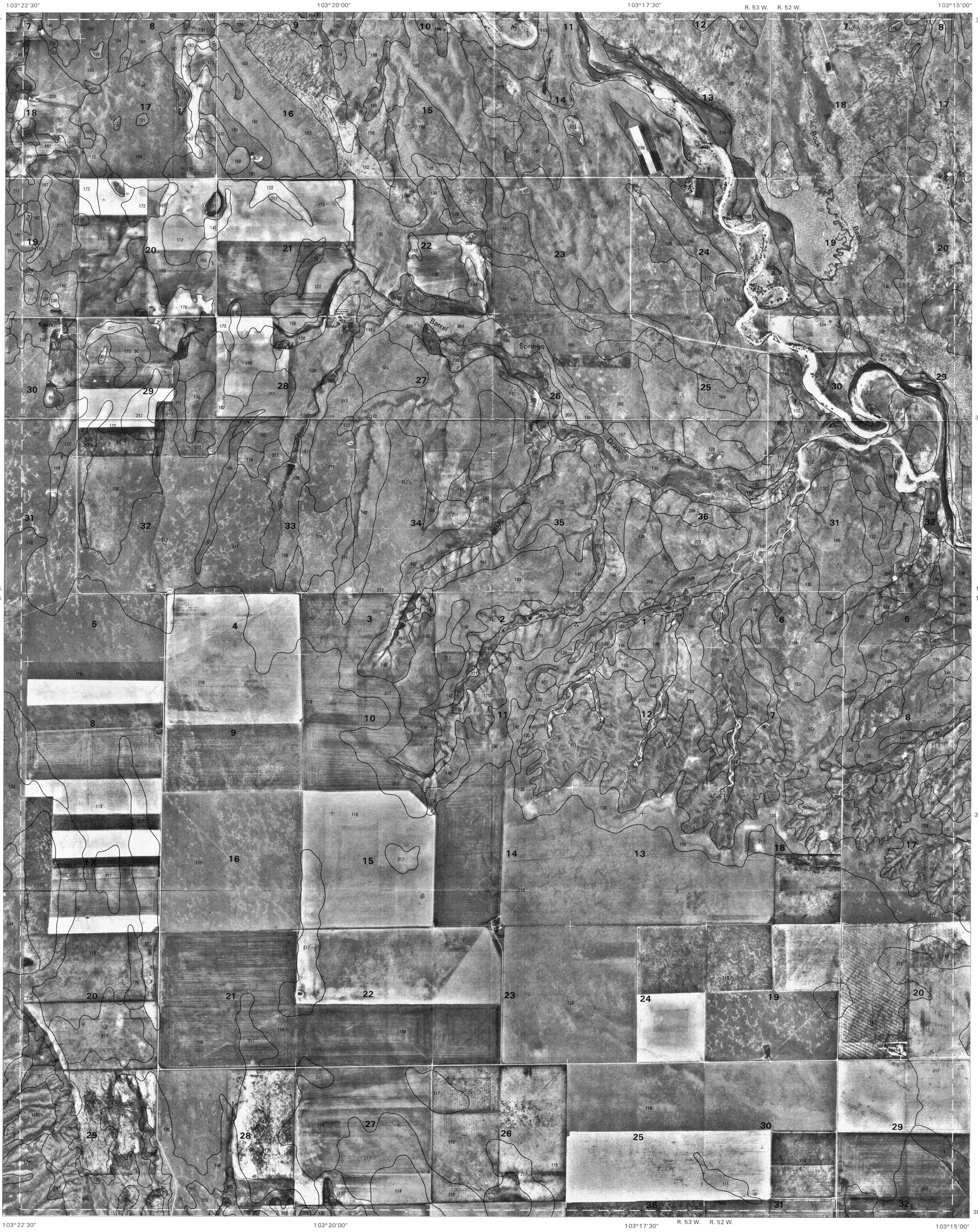
1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS



QUADRANGLE LOCATION

HUBBARD LAKE, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 44 OF 54




Joins sheet 52, Scott Draw

Joins sheet 53, Bluff Spring

Joins sheet 54, Galatea SW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

MILES: 1 0 1

FEET: 1000 0 1000 2000 3000 4000 5000 6000 7000

KILOMETERS: 1 0 1

QUADRANGLE LOCATION

BARREL SPRINGS DRAW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 45 OF 54

Joins sheet 37, Rock Basin

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCON COUNTY, COLORADO
STACY LAKES DRAW QUADRANGLE
SHEET NUMBER 46 OF 54

Joins sheet 38, Aroya

103°15′00″ 103°12′30″ 103°10′00″ 103°07′30″

R. 52 W. R. 51 W.

38°45′00″ 38°42′30″ T. 15 S. T. 16 S. 38°40′00″ 38°37′30″

Stacy Lakes

Stacy Lakes Draw

Rush Creek

CHEYENNE COUNTY

Joins sheet 45, Barrel Springs Draw

Joins sheet 53, Bluff Spring

Joins sheet 54, Galatea SW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

STACY LAKES DRAW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 46 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
TRUCKTON SE QUADRANGLE
SHEET NUMBER 47 OF 54

Joins sheet 39, Truckton NE
Joins sheet 40, Sanborn Reservoir
Joins sheet 48, Cockleburn Springs

104° 07′ 30″ | 104° 05′ 00″ | R. 60 W. | R. 59 W. | 104° 02′ 30″ | 104° 00′ 00″

38° 37′ 30″ | T. 16 S. / T. 17 S. | 38° 35′ 00″ | 38° 32′ 30″ | T. 17 S. / T. 18 S. | 38° 30′ 00″

NEELY ROAD

EL PASO COUNTY | PUEBLO COUNTY | CROWLEY COUNTY

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

TRUCKTON SE, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 47 OF 54

104°00′00″ 103°57′30″ R. 59 W. R. 58 W. 103°55′00″ 103°52′30″

38°37′30″ T. 16 S. T. 17 S. 38°35′00″ 38°32′30″ T. 17 S. T. 18 S. 38°30′00″

NEELY ROAD

Cromer Creek

Joins sheet 47, Truckton SE

Joins sheet 49, Walker Point

CROWLEY COUNTY

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1993-1994 aerial photography. Hydrography, culture, and public land survey system (PLSS) information were acquired from U.S. Geological Survey.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

COCKLEBURR SPRINGS, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 48 OF 54

103°52′30″ | 103°50′00″ | 103°47′30″ | 103°45′00″

R. 58 W. R. 57 W.

38°37′30″

T. 16 S.
T. 17 S.

38°35′00″

38°32′30″

T. 17 S.
T. 18 S.

38°30′00″

Joins sheet 48, Cockleburn Springs

Joins sheet 50, Sharp Lake

CROWLEY COUNTY

Dead Horse Creek

Ninemile Flats

Walker Point

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1993-1994 aerial photography. Hydrography, culture, and public land survey system (PLSS) information were acquired from U.S. Geological Survey.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

WALKER POINT, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 49 OF 54

Joins sheet 41, Peace Valley

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 42, Forder

LINCOLN COUNTY, COLORADO
SHARP LAKE QUADRANGLE
SHEET NUMBER 50 OF 54

Joins sheet 43, Karval

103°45′00″ R. 57 W. R. 56 W. 103°42′30″ 103°40′00″ 103°37′30″

38°37′30″ T. 16 S. T. 17 S.

38°35′00″

38°32′30″

T. 17 S. T. 18 S.

38°30′00″

Joins sheet 49, Walker Point

Joins sheet 51, Metz Springs

Little Horse Creek
Sheets Ford
Little Horse Creek
Sharp Lake
Little Horse Creek
Sheets Fork
Horse Creek
Fork Horse Creek
Sand Creek
NINEMILE FLATS
CROWLEY COUNTY

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NORTH

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

QUADRANGLE LOCATION

SHARP LAKE, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 50 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
METZ SPRINGS QUADRANGLE
SHEET NUMBER 51 OF 54

Joins sheet 42, Fowler
Joins sheet 43, Karval
Joins sheet 44, Hubbard Lake
Joins sheet 50, Sharp Lake
Joins sheet 52, Scott Draw

103°37′30″ 103°35′00″ 103°32′30″ 103°30′00″
R. 56 W. R. 55 W. R. 55 W. R. 54 W.
38°37′30″ 38°35′00″ 38°32′30″ 38°30′00″
T. 16 S. T. 17 S. T. 17 S. T. 18 S.

Arroyo
Scott
North Fork Big Sandy Creek
Wild Horse Point
Blakeman Lake

CROWLEY COUNTY
KIOWA COUNTY

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NORTH

SCALE 1:24000

1 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000
FEET
1 0 1
KILOMETERS

QUADRANGLE LOCATION

METZ SPRINGS, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 51 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
SCOTT DRAW QUADRANGLE
SHEET NUMBER 52 OF 54





103°30′00″ 103°27′30″ 103°25′00″ 103°22′30″

38°37′30″ 38°35′00″ 38°32′30″ 38°30′00″

R. 54 W. R. 53 W.

T. 16 S.
T. 17 S.
T. 18 S.

Joins sheet 51, Metz Springs

Joins sheet 53, Bluff Spring

KIOWA COUNTY

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

SCOTT DRAW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 52 OF 54

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

LINCOLN COUNTY, COLORADO
BLUFF SPRING QUADRANGLE
SHEET NUMBER 53 OF 54

Joins sheet 44, Hubbard Lake
Joins sheet 45, Barrel Springs Draw
Joins sheet 46, Stacy Lakes Draw
Joins sheet 52, Scott Draw
Joins sheet 54, Galatea SW

103°22'30" 103°20'00" 103°17'30" R. 53 W. R. 52 W. 103°15'00"

38°37'30" 38°35'00" 38°32'30" 38°30'00"

T. 16 S.
T. 17 S.
T. 18 S.

KIOWA COUNTY

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000
FEET
1 0 1
KILOMETERS

QUADRANGLE LOCATION

BLUFF SPRING, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 53 OF 54

Joins sheet 45, Barrel Springs Draw

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 46, Stacy Lakes Draw

LINCOLN COUNTY, COLORADO
GALATEA SW QUADRANGLE
SHEET NUMBER 54 OF 54

103°15′00″ 103°12′30″ R. 52 W. R. 51 W. 103°10′00″ 103°07′30″

38°37′30″ T. 16 S. T. 17 S.

38°35′00″

38°32′30″

T. 17 S. T. 18 S. 38°30′00″

CHEYENNE COUNTY

KIOWA COUNTY

Joins sheet 53, Bluff Spring

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 13. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

QUADRANGLE LOCATION

GALATEA SW, COLORADO
7.5 MINUTE SERIES
SHEET NUMBER 54 OF 54